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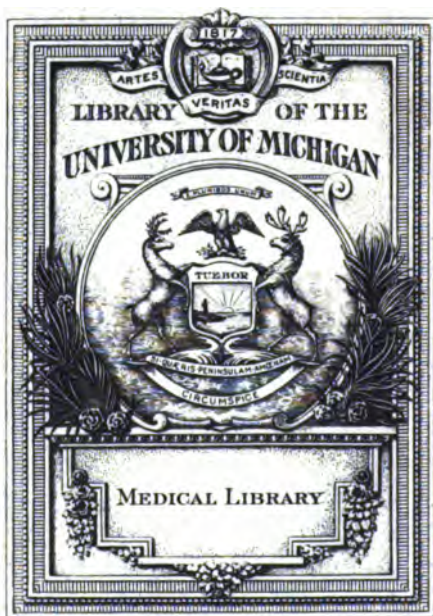
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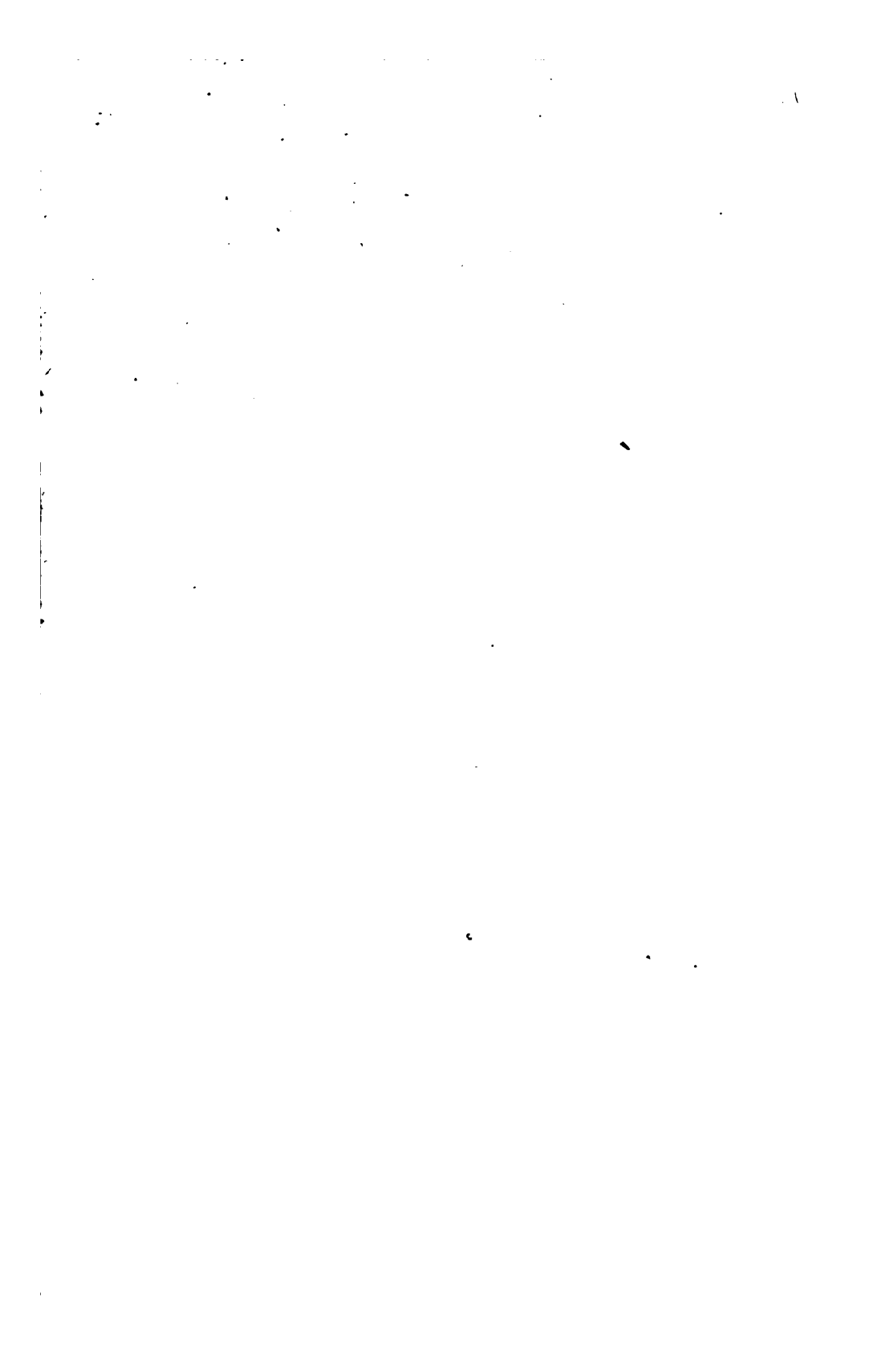


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COURSE OF LECTURES

ON

DISEASES OF THE HEART.

Delivered at St. Vincent's Hospital during the Session 1849-50.

By O'BRYEN BELLINGHAM, M.D.

Fellow of, and Professor in, the School of the Royal College of Surgeons in Ireland, and one of the Medical Officers of the Hospital.

LECTURE I.

Introductory remarks—Shape of the heart—Divisions of the heart—Circular and longitudinal grooves—Position of the heart—Relations of the heart—Region of the heart's superficial dulness—Connections of the heart—Chambers of the heart—Mode of opening the heart to display its interior—Description of the right auricle—right auriculo-ventricular orifice—Description of the right ventricle—Tricuspid valve—Pulmonary orifice—Sigmoid valves—Sinuses of the pulmonary artery.

INTRODUCTORY REMARKS.

THE heart, the central organ of the circulation, by which the blood is transmitted to the lungs, and to the remotest parts of the body, and to which the blood from the lungs, and from every part of the system, is returned, is a hollow muscular viscus, divided in its interior into several distinct compartments, covered externally and lined throughout by serous membrane; situated in the middle mediastinum, near the centre of the cavity of the thorax, about the junction of the superior with the two inferior thirds of the body; lying between the lungs and the two layers of pleura which constitute the mediastinum, and enclosed in a proper fibro-serous capsule, the pericardium.

The heart occupies the first place in the circulatory system; its functions yield in importance to no other organ, for life is dependent upon its regular and constant action, and the healthy exercise of the functions of every other organ mainly depends upon its integrity. Hence its physiology and pathology have always constituted subjects of the highest interest to the medical inquirer, and its diseases have occupied the pen of some of the brightest ornaments of the medical profession.

Although much valuable information upon various points connected with our subject existed previous to the discovery of

auscultation, much, also, it must be confessed, remained unknown. Laennec's beautiful discovery opened up an altogether new means of investigating the diseases of this organ; it added, in fact, a new sense to our other methods of detecting and distinguishing between them; and it gave an impulse to the study of diseases of the thoracic viscera which has continued unabated to the present day. So that there are scarcely any other organs the physiology and pathology of which have made more rapid advances, and the present state of our knowledge of which so remarkably contrasts with that which prevailed at a period comparatively recent.

If it be true, as a general rule, that abnormal conditions of organs cannot be recognised or distinguished without a knowledge of what constitutes their healthy state, and that derangement of function cannot be explained without an acquaintance with the functions in health, to no organ does this so peculiarly or with such force apply as to the heart; and yet, until within a few years, we had little positive information upon points apparently so simple as the size and weight of the healthy heart: erroneous opinions likewise prevailed respecting the thickness of the walls, the capacity of the cavities, and the diameter of the orifices of the healthy heart; and nothing certain was known as to the mechanism by which its sounds are produced.

It is obvious that unless correct ideas on these heads are entertained, we shall not be in a position to decide whether the parietes of the heart are hypertrophied or attenuated; whether its chambers are dilated or preserve their normal dimensions; or whether its orifices are increased or diminished in diameter. Unless the exact size and shape and position of the heart are known, deviations from its normal condition are liable to be overlooked, or functional derangement to be mistaken for organic disease; and unless we are familiar with the normal sounds of the heart, with the situation at which they are best heard, and with the mechanism by which each is produced, we shall not be in a position to recognise abnormal sounds, much less to trace them to their source, or to determine their cause.

I propose, therefore, previous to entering upon diseases of the heart, to consider briefly the anatomy and physiology of this organ; to describe its exact position, and the relation of its several parts to points upon the surface; to give a summary of the researches which have been made respecting its weight and size, the thickness of its parietes, the capacity of its cavities, and the diameter of its orifices; and to notice shortly the relations and connexion of its investing membrane, the pericardium.

Shape of the heart.—The shape of the heart is almost too well known to require description; the older anatomists compared it to a pyramid, or to a flattened cone; but a flattened cone (as Winslow remarked) is not a cone. The heart, taken as a whole, has not a regular geometrical figure; and as the term *cordiform* has been generally adopted, and is familiar to most persons, it will be sufficient to say that the heart has a cordiform shape, the auricles forming the upper and broader part, the ventricles the lower, narrower, and more conical part; this conical form of the ventricular portion of the organ being produced by the peculiar arrangement of the muscular fibres which go to form its walls.

The base of the heart is formed by the auricles, its apex by the left ventricle alone, as the right ventricle does not descend as low as the left. The anterior surface of the ventricular portion of the heart is convex; the posterior surface, which rests upon the diaphragm, is flattened. The left border or edge of the heart is obtuse and rounded; the right edge is more acute.

Divisions of the heart.—The heart, although apparently a single organ, is in reality double, and consists of two symmetrical hearts joined together, each with its own system of vessels, each circulating a different kind of blood, and each performing a distinct office; the one circulating the blood through the lungs, the other through the system; the one receiving and transmitting venous, the other arterial blood, but both simultaneously performing their functions.

One of these divisions of the heart is termed the *right*, the other the *left* side of the organ; but, from their relative position, the former should rather (as was long since pointed out by Winslow) be termed the anterior, the latter the posterior side of the heart. These terms are retained from the earlier anatomists, having been applied at a period when the knowledge of anatomy was derived chiefly from the dissection of animals, in which the heart always lies vertically in the chest, not obliquely as in the human subject. Each of these divisions of the heart consists of two cavities, an auricle and a ventricle, which communicate with one another but have no direct communication with their corresponding cavities: the auricle on both sides is above, the ventricle below.

The parietes of the right side of the heart, particularly of the ventricular portion, are much thinner than those of the left; the right ventricle has merely to transmit its blood through the lungs, while the left has to transmit its blood throughout the system. The pulmonary artery,

likewise, has thinner coats and more delicate valves, than the aorta, evidently because so much power of resistance was not required.

The right side of the heart, owing to its receiving and transmitting dark or venous blood, was named by Bichat, "*cœur à sang noir*;" the left side, from its receiving and transmitting red or arterial blood, was termed by him, "*cœur à sang rouge*." The right auricle is sometimes termed the sinus of the *venæ cavæ*; the left, the sinus of the pulmonary veins. The right ventricle is sometimes termed the pulmonary ventricle; the left, the aortic or systemic ventricle.

Circular and longitudinal grooves.—The distinction between these parts is marked by grooves upon the surface of the heart; two of which are longitudinal, and one circular. The anterior longitudinal groove runs from the base of the ventricles to the right side of the apex of the heart, dividing this part into two unequal halves: in it, the principal division of the anterior or left coronary artery is lodged. Upon the posterior surface, a similar groove, which divides the ventricular portion of the heart into two nearly equal parts, lodges a large branch of the posterior or right coronary artery. These grooves, which are often in a great measure obliterated by adipose tissue, mark pretty exactly the site of the septum ventriculorum. In some instances, owing to the anterior longitudinal groove being continued through the apex, this part has the appearance of being double or forked. Morgagni found this well marked in five out of eighteen subjects, which he examined for the purpose. The circular groove, which runs round the heart between the base of the ventricles and the auricles, lodges the trunk of the posterior or right coronary artery, and a large branch of the anterior or left coronary artery: it marks the line of separation between the auricles and the ventricles.

The fat which accumulates upon the surface of the heart is always first deposited in these grooves: in the circular groove first; next in the anterior; and next in the posterior longitudinal groove: when a larger amount occurs, it will be found also along the thin edge of the right ventricle, and upon the margin of the appendices of the auricles, particularly the left. It is usually met with in persons who have a general tendency to obesity; but a considerable amount is occasionally found in subjects dying of chronic disease, accompanied by the absorption of all the subcutaneous fat. Fat is altogether absent in the heart of the infant, and M. Bizot has shown that sex has some influence upon its deposition, as it is more frequent in the female than the male; and this holds good

even in diseases accompanied by much emaciation: thus in eleven males who died of phthisis, fat was completely absent in six; while in twenty-six females who died of the same disease, it was completely absent in only three.

Position of the heart.—In order to determine the exact and the relative position of the heart, the most eligible plan to adopt is to dissect away the soft parts from the front of the chest, with the intercostal muscles, in a subject where the parts are perfectly healthy: the pericardium being then laid open, the position of the heart, and the relation of its several parts to fixed points upon the surface, can be readily determined.

The heart is situated obliquely in the cavity of the thorax, from above downwards, from before backwards, and from right to left: it lies behind the middle and lower bone of the sternum; also behind the cartilages of the 3d, 4th, and 5th right ribs near the sternum; and the cartilages of the 3d, 4th, 5th, and 6th ribs on the left side; in front of the bodies of the 6th, 7th, and 8th dorsal vertebræ; and immediately above the diaphragm, upon the cordiform tendon of which it rests, the serous layer of the pericardium only being interposed.

Owing to its oblique position, the base of the heart looks upwards and backwards towards the right shoulder, its apex downwards and forwards towards the space between the cartilages of the 5th and 6th ribs on the left side, where its impulse may be felt during life. In the early period of intra-uterine life the heart lies vertically in the chest, as in mammalia generally: it is not until the beginning of the fourth month that it commences to assume the position which it afterwards retains.

Relations of the heart.—In the healthy chest, the heart is overlapped laterally, and in a great measure in front, by the lungs; posteriorly the œsophagus and descending aorta lie between it and the bodies of the dorsal vertebræ. Inferiorly the heart rests upon the cordiform tendon of the diaphragm, the serous layer of the pericardium only being interposed. The base of the heart is on a line with the interval between the cartilages of the 2d and 3d ribs: its apex is a little below the 5th left rib, slightly to the left of the junction of this rib with its cartilage. During life its impulse is felt between the cartilages of the 5th and 6th left ribs, at a point about two inches below the nipple (in the male), and three inches to the left of a vertical line through the centre of the sternum; the nipple in the adult male being immediately opposite the lower edge of the fourth left rib, a little more than an inch to the left of the junction of this rib with its cartilage.

Region of the heart's superficial dulness.—The anterior border of the lungs in the healthy subject corresponds above to a vertical line through the centre of the sternum: about the middle of this bone, and pretty nearly on a line with the cartilage of the fourth ribs, the margins of the opposite lungs begin to separate from one another, the line of the left being much more oblique than that of the right. Thus, a small portion of the heart's surface is uncovered by lung, which has a triangular shape, the base below, the apex above: it consists of a portion of the apex of the right ventricle, and part of the left ventricle near its apex. This triangular space is seated on a plane below the nipple and the fourth rib: its base is on a line with the cartilage of the sixth ribs; its right boundary is nearly a vertical line through the centre of the sternum; its left an oblique line through the cartilages of the fifth and sixth ribs on the left side. This is the part of the præcordial region where the heart is in contact with the parietes of the chest, and where a dull sound is yielded by percussion.

The relations of the lungs to the heart, and consequently the amount of the surface of the heart which comes in contact with the parietes of the chest, are altered, it must be recollected, by respiration, particularly by a forced inspiration or expiration: they are likewise materially altered by disease. On a full inspiration the lungs expand, and the heart is more overlapped by these organs; at the same time the contraction of the muscular fibres of the diaphragm draws downwards its centraltendon (to which the pericardium is attached), and with it the heart: hence the region of the heart's dulness will be both diminished laterally and will be on a plane lower down than natural. "The deepest possible inspiration, however, even in cases of emphysema, never (according to Dr. Sibson) obliterates the region of the heart's dulness." "It is often, under such circumstances, quite below the sternum, and behind the xyphoid cartilage, and the cartilages of the 6th, 7th, and 8th left ribs." On a full expiration, the volume of the lungs is diminished, less of the heart's surface is overlapped by them, and the region of the heart's dulness will be enlarged laterally; while, owing to the ascent of the diaphragm, and the diminished volume of the lungs, it will be on a plane somewhat higher than natural. In persons with narrow chests, the region of the heart's dulness is almost always greater than in individuals with broad and expanded chests.

Connexions of the heart.—The heart, I have said, rests upon the diaphragm: it is connected to it by the fibrous layer of the pericardium which is inserted

cordiform tendon, as well as by the serous layer which lines the central aponeurosis of the diaphragm where the fibrous layer is deficient. It is still further connected to it by the ascending vena cava; the orifice in the tendinous portion of the diaphragm by which this vein passes from the abdomen to the thorax is close to the junction of the inferior cava with the right auricle of the heart; and the tendinous fibres which come off from the margin of the foramen in the diaphragm proceed upwards and downwards upon the anterior, posterior, and lateral surfaces of the vein, and unite the two parts very closely together. The opening in the diaphragm through which the ascending cava passes, corresponds to the upper part of the xyphoid cartilage: it is on a line with the cartilage and lower margin of the fifth ribs in front, and with the body of the ninth dorsal vertebra posteriorly.

The heart is retained *in situ* by the pericardium, by the two layers of pleura which constitute the mediastinum, and by the great vessels which convey the blood to and from it; above, the aorta and pulmonary artery proceed from the base of the ventricles; posteriorly, upon each side of the left auricle, the pulmonary veins open into it; on the right side posteriorly the ascending and descending venæ cavae open into the right auricle; the former vein, as I have said, being intimately united to the diaphragm.

The base of the heart, from its connection with the great vessels, is in a great measure fixed: the apex and body of the ventricular portion are free, but the motions of this part are limited by the pericardium. The whole organ is, however, liable to slight changes of position during inspiration or expiration, and in the erect or recumbent posture: during inspiration the heart descends slightly; during expiration it ascends slightly; in the recumbent posture the heart recedes from the parietes of the thorax; in the erect posture it approaches them. In diseased states of the lungs or pleura the heart may be displaced considerably: thus, when a large amount of fluid is effused into the pleura on one side, the heart will be pushed towards the opposite side: in emphysema of the lungs of long standing, the heart is protruded downwards; while in large abdominal tumors, in ascites, pregnancy, &c., it will be pushed upwards. In cases of large intrathoracic tumors, the heart may be displaced either upwards, downwards, forwards, backwards, or laterally, according to the situation and size of the tumor, and the rapidity of its growth. These matters will, however, be fully considered when we come to describe the diseased states of the organ.

Chambers of the heart.—The chambers of the heart are four in number,—two auricles, and two ventricles. The auricles are two musculo-membranous sacs, which occupy the upper and posterior part of the organ, forming its base, separated from one another by a thin musculo-membranous septum; the ventricles are two muscular cavities, which form the body and apex of the heart, separated from one another by a thick muscular septum. The auricle and ventricle upon each side communicate with one another by a large orifice, through which the blood can pass readily from the former into the latter cavity, but is prevented from returning by a valvular apparatus. The right auricle receives the venous blood from the system generally, from which it passes into the right ventricle, by which it is propelled through the lungs. The left auricle receives the arterialized blood from the lungs, from which it passes into the left ventricle, by which it is propelled through the system. The auricles and ventricles contract and dilate alternately, and a double circulation is thus constantly going on,—a lesser and a greater, or a pulmonic and systemic, and the blood traverses two circles in its course,—a greater and a lesser, which are continuous the one with the other.

The organs which belong to the greater or systemic circulation are the left ventricle, the aorta and its branches, the veins of the body, and the right auricle. The organs which belong to the lesser or pulmonic circulation are the right ventricle, the pulmonary artery and veins, and the left auricle. The greater or systemic circulation commences in the minute ramifications of the pulmonary veins, and terminates in the capillaries of the arteries of the body. The lesser or pulmonic circulation begins in the capillaries of the veins of the body, and ends in the ultimate ramifications of the pulmonary artery. Thus the blood which has served the purposes of nutrition is brought by the venæ cavae to the right side of the heart, by which it is transmitted to the lungs, where it is submitted to the action of atmospheric air, and assumes the bright red colour of arterial blood. It is then returned by the pulmonary veins to the left side of the organ, to be again distributed throughout the system.

Mode of opening the heart.—In order to display the interior of the ventricles, and to permit of the examination of the valves, some care is required in opening the heart. The most simple and most convenient method appears to me to be to commence the incision in the pulmonary artery, carrying it through this vessel into the right ventricle, cutting between the

sigmoid valves, and continuing it to the apex, keeping close to the septum. A transverse incision, meeting the other about its centre, may then be made in the walls of the right ventricle. The aorta being then separated from the pulmonary artery, a similar incision is to be made through it into the left ventricle, and continued to its apex, keeping close to the septum. This incision can then be continued on through the apex upon the posterior surface of the heart. To display the interior of the right auricle a crucial incision may be made upon its anterior aspect, while the left auricle may be opened upon its posterior aspect, between the orifices of the opposite pulmonary veins.

Right auricle.—The right auricle forms the right, the inferior, and a portion of the anterior surface of the base of the heart. Its anterior surface lies to the right of the sternum; its posterior surface rests upon the diaphragm. It consists, in general terms, of a sinus, and an auricular appendix. The sinus of the auricle receives the blood from the descending and ascending venæ cavæ; the auricular appendix, which lies behind the cartilage of the third right rib, its tip resting against the right side of the ascending portion of the arch of the aorta, pretty nearly on a line with the sigmoid valves of the pulmonary artery, has a rude resemblance to the ear of a dog, from which it received the name, which has come since to be applied to the entire chamber. It varies somewhat in size and shape in different subjects. Its margin is often notched or serrated, something like the edge of the comb of a cock (to which the earlier anatomists compared it). This appearance is, however, usually better marked in the appendix of the left than the right auricle.

The capacity of the cavity of the right auricle exceeds that of the left (as first pointed out by Vesalius): its parietes are also thinner. Between the orifice of the superior cava and the appendix of the auricle a thick fasciculus of muscular fibres projects upon the interior, from which smaller fasciculi come off at a right angle, and run parallel to one another towards the appendix. The latter have received the name of *musculi pectinati*, from their fancied resemblance to the teeth of a comb, the thick fasciculus before mentioned forming its back. This is more evident in hearts in which the walls of the auricle are hypertrophied. In the auricular appendix the adjoining fasciculi are connected together by transverse branches, which gives its interior a reticulated appearance. In the interstices of these fasciculi the parietes of the auricle, when put on the stretch, will be observed to be semitransparent in some

places, the pericardium and endocardium being at these points in contact, and alone forming its walls.

On its right side posteriorly the right auricle receives the blood from the descending or superior, and the ascending or inferior vena cava. The former returns the blood from the head and upper extremities, and opens into the superior and anterior part of the auricle; the latter, which is on a plane posterior to it, returns the blood from the abdomen and lower extremities, and opens into the lower and back part of the auricle, near the septum auricularum. The manner in which the two venæ cavæ communicate with the auricle is such that the blood from the superior cannot fall into the orifice of the inferior cava. The current of the superior cava is downwards and forwards towards the auriculo-ventricular orifice: the current of the inferior cava is backwards and to the left side, towards the septum of the auricles, and it enters the auricle nearly at a right angle with the rest of the vein, immediately above the Eustachian valve, which directs the current towards the fossa ovalis.

The left posterior wall of the auricle is formed by the septum auricularum, at the lower part of which, immediately above the orifice of the inferior cava, we see the remains of the foramen ovale, through which, during fetal life, the blood passed from the right to the left auricle, particularly that conveyed by the ascending vena cava, which is directed towards this orifice by the Eustachian valve. It is by no means rare to find the foramen ovale only partially obliterated in hearts otherwise perfectly healthy, and in subjects who had never exhibited any symptom of morbus coeruleus. The opening is usually valvular, is seated at its upper part, and will frequently admit a probe or the handle of a scalpel. M. Bizot states that he found the foramen ovale in the same condition in which it is at birth, or only partially obliterated, in eighteen out of seventy-three male subjects, and in twenty-six out of eighty-two female.

Right auriculo-ventricular orifice.—Inferiorly the auricle is united to its corresponding ventricle, and here the orifice of communication between the auricle and the ventricle is seated. This, the right auriculo-ventricular orifice, has an elliptic shape, the long diameter from before backwards, as the heart lies in situ: it is larger than the corresponding orifice of the left side, and its margin, like that of the latter, consists of dense, white, fibrous or tendinous tissue. By the older anatomists this was termed the right tendon of the heart. "It is plainly," Bell observes, "the place

of union between the auricle and the ventricle, which are in the fœtus (the chick, for example) distinct bags." The right auriculo-ventricular orifice is situated behind the sternum, pretty nearly on a line with the junction of the cartilages of the fourth ribs with that bone. Between the Eustachian valve and the auriculo-ventricular orifice the opening of the coronary vein is situated, provided with a valve formed by a semilunar fold of the lining membrane, which partially closes its orifice, and prevents regurgitation into it.

Right ventricle.—The right or pulmonic ventricle forms the right anterior and inferior portion of the body of the heart. The greater part of it lies behind the sternum. On the left side of this bone it extends under the sternal extremity of the cartilages of the third, fourth, fifth, and sixth left ribs: on the right side of this bone a small portion of it extends under the cartilages of the fourth and fifth right ribs, close to the sternum. Its inferior margin is about on a line with the junction of the xyphoid cartilage and the sternum. The base of the right ventricle is connected to the auricle of the same side: its apex is a little above the apex of the heart: its anterior wall, which lies immediately under the sternum, is convex: its inferior wall, which rests upon the diaphragm, is flattened: its left or posterior wall is formed by the septum ventriculorum.

The parietes of the right ventricle are much thinner, its columnæ carneæ are smaller, and its cavity (as was first pointed out by Vesalius) is somewhat larger than that of the left ventricle: this has been supposed to depend upon its parietes being more yielding than those of the left, and from the blood accumulating in, and distending it after death; but accurate measurement has shown that its cavity exceeds the left in capacity. The right ventricle has not a regular or symmetrical shape,—it is broader, but not so long as the left; the septum, which is convex towards its cavity, belongs more to the left than the right ventricle: and, as Bell remarked, "the right ventricle seems to be wrapped round the left," while the latter alone forms the apex of the heart. The right ventricle ascends higher than the left: hence the orifice of the pulmonary artery is on a plane higher than that of the aorta.

The cavity of the right ventricle consists of two parts, as first particularly described by Lieutaud—viz. an *arterial* and an *auricular* portion, separated from one another by a prominent bundle of muscular fibres, and by the largest division of the tricuspid valve. The arterial portion—the "*conus arteriosis*" of Wolff, the "*infundibulum*" of Cruveilhier—is very smooth upon its

surface, leads towards the pulmonary artery and is prolonged upwards above the level of the rest of the ventricle; in it the current is established by the systole of the ventricle, which is continuous with that of the pulmonary artery. The auricular portion, on the other hand, is very irregular upon its surface, owing to numerous prominent bundles of muscular fibres (the *columnæ carneæ*) which exist here; it receives the blood directly from the right auricle, and into it there is a current through the auriculo-ventricular orifice until the closure of the tricuspid valve. Mr. Serle, in his account of the arrangement of the muscular fibres of the heart, describes the cavity of the right ventricle as consisting of three parts: an "auricular," a "pulmonary or ventricular," and an "apical;" the pulmonary and apical form the arterial portion of Lieutaud. "The pulmonary (according to him) is that formed by the fibres which arise from the root of the pulmonary artery at its entire circumference: the apical channel is that which forms the channel of communication between the other two, and which extends to the apex."

The *columnæ carneæ* are very numerous in the auricular portion of the ventricle: many run from the apex towards the base, others cross them, leaving deep sulci between them; some of these fleshy columns are attached in their whole length, others only by their extremities, and others again only by one extremity, the opposite giving insertion to the chordæ tendinæ of the tricuspid valve: the latter, which are sometimes termed *musculi papillares*, are fewer in number than either of the other kinds.

At the base of the ventricle two orifices are situated: one (the auriculo-ventricular orifice) communicates with the auricle on that side; the other is the orifice of the pulmonary artery: each is provided with a valvular apparatus. The auriculo-ventricular orifice is situated at the posterior and right side of the base of the ventricle; the pulmonary orifice is to the left side, immediately above the septum of the ventricles, on a plane anterior to, and three quarters of an inch higher up, than the other.

Tricuspid valve.—The right auriculo-ventricular orifice is encircled by a valve, formed by a duplicature of the lining membrane, strengthened by fibrous tissue, which comes off from the margin of the orifice: the free extremity of this valve hangs down into the ventricle, where, by means of the chordæ tendinæ, it is connected to the *columnæ carneæ*, and so with the walls of the ventricle. This valve is termed tricuspid (three-pointed) by the older writers, triglochine (three-angled), its free margin forming three principal divisions: the chordæ tendinæ are the tendons, the *columnæ carneæ*

the muscles of this valve; the tendinous cords converge from the point where they are attached to the valve, and several of them are inserted into a single fleshy column: when the latter contract the tendinous cords are made tense; hence, as the fleshy columns contract during the ventricular systole, the valve is shortened, and prevented from being reversed.

Three principal divisions of the tricuspid valve are distinguished—an anterior, a right, and a posterior: the anterior division separates the auriculo-ventricular from the pulmonary orifice, and is supposed to prevent the blood from passing into the pulmonary artery during the dilatation of the ventricle; but (as was remarked by Senac long since) this can scarcely be necessary, because during the ventricular diastole the sigmoid valves close the arterial orifice; the second division of the valve lies to the right side; and the third, which constitutes the posterior division, lies behind. It would be more natural to consider this valve, like the mitral, as composed of two principal divisions: an anterior, which would include the anterior and right division, and a posterior, which would correspond to the posterior division: in describing the valve, however, it is convenient to consider it as composed of three curtains.

The anterior curtain is connected by its chordæ tendinæ principally with one large and long fleshy column, which has two roots: one of these roots springs from the anterior wall of the ventricle; the other, which runs transversely, is attached to the septum of the ventricles: this is the portion which Mr. W. King terms the "long moderator band." The right curtain is connected by its fleshy columns to the parietes of the ventricle, not to the septum: two fleshy columns are attached in front; the others, which are much shorter, are attached to the posterior wall of the ventricle. The fleshy columns of the posterior division of the valve are much shorter than those of either of the others, and some of its tendinous cords are inserted without the intervention of any fleshy columns: they are all inserted into the septum.

A single slender tendinous cord, not proceeding from any fleshy column (which, however, is absent in some hearts), is attached by one extremity to the anterior division of this valve, sometimes near where the chordæ tendinæ join the fleshy column, more frequently to the fleshy column itself, either near its base or apex, from which it runs towards the right wall of the ventricle into which it is inserted, or to the fleshy columns of one of the divisions of the valve. The setæ tendinæ will be to prevent the anterior curtain of the valve from

plied to the orifice when the ventricle is much distended; and from its insertion into the yielding wall of the ventricle, the more the ventricular cavity is distended the more open will it keep this curtain of the valve; while when the ventricle is not over-distended it will not interfere with the perfect action of the valve.

Pulmonary orifice.—The orifice of the pulmonary artery is situated on a plane about three-quarters of an inch higher than the auriculo-ventricular orifice, to its left side and more anteriorly; the surface of the ventricle from which it arises, and below this point, is perfectly smooth. The pulmonary orifice lies pretty nearly on a line with the junction of the cartilages of the third ribs with the sternum, very little to the left of this bone; it has a circular shape, is smaller than the auriculo-ventricular orifice, and is provided with a valvular apparatus at the point where the artery joins the ventricle, formed of folds of the lining membrane, strengthened by fibrous tissue.

Sigmoid valves.—The valves at the orifice of the pulmonary artery are three in number; they are analogous to the valves at the orifice of the aorta, but are thinner and more delicate. Morgagni gave them the name *sigmoid*, while those at the aortic orifice he named *semilunar*: these terms are, however, nearly indiscriminately used. The sigmoid valves have a crescentic shape as they lie against the walls of the artery: they are attached at the point where the pulmonary artery joins the ventricle, and this point or their base corresponds to a line across the inferior margin of the cartilage of the third ribs. One of these valves is anterior, another posterior or to the left side, and the third to the right side; each is attached by its convex margin, the concave or free margin being loose: their edges are a little thicker than the other parts, and in the centre of each near the margin a very minute nodule is seated, though in some instances scarcely a trace of it is to be found.

The sigmoid valves, when the blood is passing out of the ventricle, lie against the walls of the pulmonary artery and present no impediment to its passage; when the ventricle ceases to contract, the blood in the artery above gets behind them, they fall down, close the orifice, and prevent regurgitation into the ventricle.

Sinuses of the pulmonary artery.—Behind each sigmoid valve is a little pouch or sinus, the coats of the vessel appear to be continued into these sinuses: these are the sinuses of the pulmonary artery. The sinus of the anterior valve evidently is to prevent itself behind the ventricular systole, and is pressed down,

the orifice closed, and regurgitation into the ventricle prevented. These sinuses also allow a space for the sigmoid valves to lie back in during the ventricular systole, by which the outlet of the artery is rendered perfectly smooth and even, as the blood is passing from the ventricle into the pulmonary artery.

Original Communications.

CLINICAL OBSERVATIONS ON SURGERY.

By R. H. MEADE, F.R.C.S.
Bradford, Yorkshire.

[Continued from last vol. p. 704.]

CASE III. — Fatal ulceration of the larynx, of which dysphagia was the earliest and most prominent symptom, leading to the erroneous diagnosis that the disease was seated in the œsophagus rather than the trachea.

I was consulted in July 1848, by a lady aged 54 (married, but without family), on account of a sharp, deep-seated pain which she felt on the right side of the neck, about the level of the cricoid cartilage, which shot through to the breast and shoulder. "It was not constant, but was always felt on swallowing food, though occasionally at other times. The general health was not very good; there was a sallow sickly look, and the patient said that she had been losing flesh and strength for several months. I learned that she had been subject for many years (above 20) to spasmodic contraction of the œsophagus, which would come on suddenly from swallowing any substance quickly, or from attempting to swallow rather a large morsel of food: when this spasm occurred, she was always obliged to leave the table, and was generally unable to swallow anything again for some hours; the spasms had always subsided however, spontaneously, by quiet and rest. On account of this affection she was very careful to eat slowly and to masticate her food well. At the time she consulted me she said that she felt no constant impediment nor difficulty in swallowing, but only pain. I suspected that there was some disease of the œsophagus, and feared, from the stabbing character of the pain,

and unhealthy aspect of the patient, that it might be of a carcinomatous nature. Nothing unnatural could be detected externally by examination with the fingers, nor was there any morbid appearance of the fauces. I prescribed some strengthening medicines, and directed the neck to be rubbed with an iodine liniment; but no benefit appearing to arise from this treatment after two or three weeks continuance, I recommended her to go to the sea side. She accordingly went to Scarborough, and remained there for several weeks, and on her return appeared much better, her general health being stronger, and the pain in swallowing nearly gone. She continued pretty well until a little before Christmas, when she was seized with a fixed pain, deeply seated by the side of the trachea and œsophagus, accompanied by a feeling of soreness and difficulty in swallowing, and also by a troublesome tickling cough and frothy expectoration. No swelling nor tenderness could at this time be detected externally in the neck; there was also no unnatural appearance in the fauces, and auscultation detected no disease in the lungs. My treatment consisted of leeches and small blisters applied to the front of the throat (both of which were several times repeated), with the internal administration of iodide of potassium, and various preparations of iron. I also affected the system gently with mercury. The symptoms gradually increased in spite of all the remedies adopted, and the patient's own impression was that the windpipe was the chief seat of disease. The cough and expectoration showed that the larynx was involved, but the previous history of the case led me to believe that the œsophagus was the part primarily affected.

Mr. Teale, of Leeds, saw the patient with me at the end of January 1849, and he took the same view of the case, recommending the introduction of a bougie into the œsophagus: accordingly, I attempted to pass one, but it gave such intense pain that I was immediately obliged to withdraw it. The bougie reached to about the level of the cricoid cartilage, where it did not meet with any decided obstruction, and the pain produced by its passage seemed to be caused by the pressure of the instrument against the larynx. Great increase of pain in the throat followed the attempt, with spasmodic obstruction of the œsophagus.

gus, so that for forty-eight hours she was unable to swallow even the slightest drop of liquid, the attempt to do so bringing on violent cough and feeling of choking. This spasmodic attack gradually subsided, but the pain in the neck increased, and was now felt chiefly on the left side of the larynx; the cough and expectoration also increased, and were accompanied by aphonia, which continued until her death, but at this time there was no dyspnoea, though she had several suffocative attacks at a later period. The difficulty in swallowing became greater, the food feeling as if it passed over a raw place, and particles often seemed to lodge in the throat. About three weeks after the first attempt I persuaded my patient to allow an instrument to be again introduced into the oesophagus, and I now passed a small sound with a very thin whalebone handle (which prevented it from pressing so much against the larynx), and this passed freely down the oesophagus, without meeting with any obstruction. The operation was not immediately followed by much increase of pain or irritation, but on the following day the spasmodic difficulty of swallowing returned, and for nearly three days nothing passed the gullet. After this I made no further attempt at the introduction of instruments, as no benefit appeared to be derived from them. No treatment afforded any relief with the exception of the administration of small doses of morphia, which soothed the cough and pain. The symptoms gradually increased in severity, the pain and difficulty in swallowing became worse, and part of everything that was taken appeared to get into the larynx and produce violent coughing: the sputa also became purulent and mixed with blood, and excessively foetid. She lingered on until the 11th of April, 1849, but during the last fortnight of her life she made an attempt to swallow, the distress which it produced being very great. Her strength was supported for a considerable time by the administration of enemata consisting of beef tea and wine, but she sank at last from continued suffering and want of food, very small quantities of the latter having been taken for the last two months of her life.

About six weeks before her death a distinct tumor was felt on the left side of the neck beneath the middle of the

sterno-mastoid muscle. It extended from about the middle of the neck to the angle of the jaw. It felt hard and unyielding, and appeared to be deeply fixed. It was painful on pressure. A smaller tumor of the same character made its appearance on the right side of the neck in the same situation during the last week or two of the patient's life.

The body was examined 48 hours after death.—The integuments having been carefully reflected from the front of the neck, the trachea and oesophagus, with the pharynx and tongue, together with the muscles, vessels, &c. connected with them, were separated from their attachments to the base of the jaw and skull, and the front of the spine, and turned downwards so that the examination might be made from behind. On opening the back of the pharynx and oesophagus, no serious disease was found in these organs. The mucous membrane of the pharynx and back of the tongue was granular, and unhealthy looking, but not thickened nor ulcerated. The oesophagus was rather narrower than usual, but there was no thickening nor induration of its coats. The fatal disease was confined to the larynx, which was extensively ulcerated. A foul, blackish-looking ulcer had completely destroyed the left side of the upper part of the larynx, down to the level of the rima glottidis. The epiglottis was thickened, but not otherwise much altered. The upper part of the left ala of the thyroid cartilage, and its ascending cornu, were completely eaten away with the membranes and ligaments attached to them. The extremity of the greater cornu of the os hyoides was also carious, and partly gone. The true chordæ vocales were entire, but appeared thickened, and the whole mucous membrane of the larynx was granular and unhealthy. There was no deposition of new matter forming any malignant tumor in connexion with either the trachea or oesophagus (as was previously expected), and the tumors, developed toward the close of life on the sides and front of the neck, were quite distinct from the disease in the throat and larynx. The structure of these tumors was rather peculiar: on reflecting the sterno-mastoid muscle from the front of the tumor on the left side, fluctuation was perceived, and on cutting into the

rior. On continuing the dissection, and examining the tumor carefully, it was found to consist of a fibrous substance, of a very firm consistence, which was full of irregular cells or cavities, communicating with each other, and filled with serous fluid. The divisions between the different cells were cribriform, and hard fibrous bands or cords traversed them in various directions. The tumor seemed to have been formed within the sheath of the great vessels. The *descendens noni* nerve was traced over its surface, but without being involved in its substance. The internal jugular vein, on the contrary, was completely obliterated for two inches of its course, being converted into a solid fibrous cord. The carotid artery and pneumogastric nerve were unaffected, though the former was closely attached to the tumor. The disease extended from about the middle of the neck quite up to the base of the skull.

The smaller tumor on the right side had exactly the same structure; it was also connected with the sheath of the vessels, but the vein was not obstructed. No disease was found in the lungs.

REMARKS.—Throughout the whole course of the above case I laboured under an error in diagnosis, thinking that the original and principal seat of the disease was in the *oesophagus*, and that the larynx was only secondarily affected. The causes which led to this error were, the history of the case, the early symptoms, and the development of the tumors in the sides of the neck towards the end of life. The patient had been subject for many years before she consulted me to spasmodic stricture of the *oesophagus*, and constant slight difficulty of swallowing; and when I first saw her the pain she complained of was only felt in deglutition. She had then no cough nor difficulty of breathing, nor had she ever been subject to either. I therefore considered that the spasmodic affection had gradually produced thickening of the coats and contraction of the canal of the *oesophagus*, which disease had ultimately assumed a cancerous form: ulceration had then taken place, which had extended to the larynx and trachea, explaining the symptoms of disease of those organs which subsequently arose; and new matter was deposited round the diseased part, which gradually involved all the surrounding

tissues, and towards the termination of the case made its way towards the sides of the neck in the form of hard tumors.

I find other cases related in which disease of the larynx has been mistaken for stricture of the *oesophagus*. Abercrombie* says—"I have seen several cases [of disease of the larynx] in which the dysphagia was the prominent symptom, so as to lead to the supposition of disease of the *oesophagus* rather than of the trachea. In one of these cases the patient had no constant difficulty of swallowing, but was liable to sudden attacks of it during his meals, which threatened instant suffocation. In another case the dysphagia was permanent, and was combined with a hoarse husky cough and slight dyspnoea. The whole body of the larynx was much enlarged and thickened; and it was in some degree ulcerated both internally and towards the *oesophagus*. In both cases the *oesophagus* was entirely healthy."

As the disease of the larynx gave rise to all the later symptoms in the progress of the disease, it had probably been also the exciting cause of the spasmodic affection of the *oesophagus* to which the patient had been so long subject; and in that case must have existed (though in a slight form) for many years. In his *Outlines of Human Pathology*, under diseases of the *oesophagus*, Mr. Mayo relates an interesting case of spasmodic difficulty of deglutition, which depended upon the irritation caused by ulceration of the interior of the larynx. For the details of this case I must refer to the work itself, not having it at hand.

The next point of interest in this case is the nature of the affection of the larynx. The existence of chronic ulceration in this part has been denied by some authors except in connection with either phthisis or syphilis, but others admit cancerous ulceration of the larynx as a primary affection, though such a disease is certainly rare. No tubercles were detected in the lungs in this case, and no suspicion of a syphilitic taint could be entertained: therefore the ulceration of the larynx must be considered as an idiopathic affection, and of a malignant or cancerous nature. No new matter was formed around, or in the diseased textures, as occurs in most forms of cancerous disease in mucous

* Diseases of the Stomach, 3d edition, page 91.

membrane, as, for instance, in cancer of the œsophagus or rectum; but cancer is described* as sometimes commencing in mucous membranes by simple hardening, which runs into ulceration. All forms of cancerous disease are remarkable for their tendency to produce secondary affections in other parts; and this leads us to the last point of interest in the case—viz. the nature of the tumors in the neck, and their connection with the disease in the larynx. As I have before stated, no direct communication existed between them. Could they be considered of a cancerous nature? I can find no cases recorded exactly of a similar character, but Müller's description of the form of carcinoma which he calls alveolar bears some resemblance to them. It consists of a tissue of firm white fibres and plates crossing each other in various directions, between which cells are found, from the size of grains of sand to that of large peas, which frequently communicate with each other, and all contain a very viscid, pale, and transparent jelly. The cells in the tumors I have described were much larger than those said to be met with in the alveolar cancer of Müller, and the fluid contained in them was limpid and apparently serous; still, from the rapidity of their development, and their connection with malignant ulceration, they must also, I think, be considered of a malignant nature. In the Surgical Anatomy of the Head and Neck,† Allan Burns describes a peculiar sacculated tumor which is sometimes met with in the side of the neck, which has some resemblance in structure to those in question, but it seems to be non-malignant, and connected with the parotid gland. He says—"sometimes the lower lobe of the parotid gland becomes sacculated, forming a collection of watery viscid fluid. Such a tumor begins just behind the angle of the jaw, and from that nucleus proceeds downwards and laterally. As the swelling is covered by the fascia it is consequently tense; and although the sides of the cyst be thin and pliant, fluctuation is obscure. This species of tumor does not require to be extirpated, its nature, so long as it is sacculated, is simple: it is a mere body of saliva hollowed out in the glandular substance."

CASE OF
CONGENITAL DEFICIENCY OF
THE AQUEOUS HUMOUR.

BY JOHN F. FRANCE,

Surgeon of the Eye Infirmary, and Lecturer on
Ophthalmic Surgery, at Guy's Hospital.

Of the singular defect described in the subjoined case, I have been unable to discover in our standard English works any instance, or even notice. Von Ammon's and Himly's volumes are equally destitute of any example of it. The case is unique in my own experience, and is of a kind that, probably, from what has just been said, has hitherto escaped the observation of the profession.

Mary Hagan, aged two years and a quarter, was brought to the Hospital by her mother, residing at 43, Bermondsey Street, Southwark, on October 26, 1849. Her birth had occurred at the full period; her health had proved undeviatingly good; and nothing particular had been remarked with respect to her, except that her eyes were admired as "fine," until shortly before her appearance at the hospital. A cough, accompanied with some emaciation and susceptibility of fatigue, caused a medical man to be consulted a few days before this event; and he then first discovered a peculiarity about the eyes, and shortness of sight. The child's condition at the date above mentioned was as follows:—The general aspect was healthy, and the child playful; the head, perhaps, was somewhat large, but the fontanelles were closed; and with the exceptions already stated, nothing morbid was manifested. The degree of prominence of the eyes was normal: the conjunctival and sclerotic coats were healthy; the latter in respect of colour, size, and tension: the corneæ were a trifle more convex than usual, (not conical); they were perfectly brilliant and transparent, exhibiting no trace of ulcer, cicatrix, or nebula. The irides were bluish in colour, and otherwise quite healthy in aspect: instead, however, of presenting a plane, (or, as is sometimes found in infancy, a slightly convex) anterior surface, they lay in accurate apposition with the internal surface of the corneæ; appearing, consequently, as convex as the latter struc-

* Chelius' Surgery, by South, vol. ii. p. 764.
† Second edition, p. 302.

tures, whether viewed in front or profile. No anterior chamber, therefore, was discoverable; and no aqueous humour could exist, save just so much as, synovia-like, might lubricate the adjacent surfaces of the iris and cornea. For, notwithstanding the remarkable conformation just described, the irides were quite active, and free from adhesions: the pupils were clear, black, and circular, retaining no vestiges of pupillary or of capsulo-pupillary membrane: and lastly, vision was good, though myopic.

Catoptrical examination was rendered impracticable by the natural restlessness of infancy; and I was besides unwilling to facilitate it by artificial dilatation of the pupils, which, under the peculiar condition of the eyes, might possibly have been attended with injurious effects. It is evident that the edges of the irides in this case, each time the pupils contracted, must have had to surmount the resistance created by the convexity of the surface they were drawn over; i. e., most likely, of the crystalline. Hence, wide dilatation of the pupils, once produced, might have been persistent, from the iridal power proving inadequate to overcome the increased resistance opposed by the entire convex face of the lens pressing forwards from behind. There was, however, no reason to doubt the existence of the crystalline. Though its presence was not catoptrically demonstrated, it might be safely inferred from the myopic state of vision;—a state satisfactorily accounted for (assuming the existence of that structure), by the higher refractive power of the vitreous than of the aqueous humour, the defect of which latter was virtually supplied by the former;—but a state irreconcilable with the hypothesis, that the lens, the humour of highest refractive power, was, as well as the aqueous, deficient.

41, Finsbury Square,
Dec. 20, 1849.

THE CHOLERA IN BUFFALO, N. Y.

THE whole number of cases reported to the Board of Health from May 30th to Sept. 7th, was 2,505; number of deaths during the same period, 858, making a ratio of mortality as 1 to a fraction less than 3.—*Boston Medical and Surgical Journal.*

THE HISTORY OF CHOLERA IN MARYPORT.

Reported by J. PEARSON, M.D. Edin.
Surgeon to the District.

WHEN giving the history of an epidemic visitation like that of cholera, it becomes of importance to state not only the situation of the place attacked, but also to trace the characters of the various epidemics which may have prevailed there for some time preceding the outbreak of the disease. When reading the numerous reports which have from time to time appeared regarding cholera, we are forcibly reminded of the meagreness of the information on this subject. We frequently hear of the disease suddenly breaking out in a town, and a number of persons being attacked simultaneously, and often the day after a person from an infected district has visited the town; and to this source the visitation of the disease is at once ascribed: notwithstanding that it is contrary to all that is known regarding the infection of other diseases, that a healthy person should immediately on visiting the sick be attacked with the disease and die in twelve hours, or even less, from the time of exposure. And if we inquire strictly into each case, we shall frequently find that though the patient has been what he calls "well," and able until the attack to follow his employment, yet that he has been for some time previously "out of health," and frequently troubled with uneasiness about the stomach and bowels.

Maryport (population 6000) is situated on the east shore of the Solway Frith, being surrounded on the south and east by the River Ellen and several acres of low ground, which during heavy rains are frequently covered with water. One portion of the town is placed upon two hills and the intervening valley, and runs in a direct line close to this ground; the other being at the foot of these hills, on the sea-shore.

Of the 88 cases which occurred in the town, 68 occurred in the first portion; and when the disease was at its worst the weather was extremely wet, and the wind from the South,—consequently driving the exhalations from the low ground over that portion of the town, the other being protected by its situation:

in fact, the disease seems to have confined itself almost entirely to that portion over which the exhalations from the low grounds would be driven with the wind in a southerly direction.

Of all the epidemics which have recently visited us, that of the scarlet fever was the most severe, commencing in July 1847, and continuing until the end of the year. Its more frequent complications were malignant sore-throat, general dropsy, and numerous deep-seated abscesses, especially about the neck.

The next in point of malignancy was the Irish fever, which was imported into the town by an Irish emigrant ship in May 1847, and continued until the end of March 1848. Great numbers of the poor contracted this disease, but none of those who recovered have taken cholera, though other members of the same family have done so; and in one or two families the exemption was remarkable. Immediately after this time an epidemic of small-pox appeared, in which the mortality to the unvaccinated was very great; but amongst the vaccinated few, if any, died. This disease lasted until the end of July 1848.

Owing to the great scarcity of food of all kinds during the winter of 1847 and spring of 1848, the poor suffered from scurvy and cachæmia.

From the beginning of December 1847 to the end of July 1848, influenza was very prevalent, but in a mild form.

From July 1848 to July 1849 we were free from any epidemic visitation, but in January 1849 we had three cases of cholera, approaching in their symptoms to the malignant disease, and during the latter portion of this period the people frequently complained of uneasiness about the stomach, accompanied with distension, and pain about the navel; with these symptoms a peculiar, red, glazed tongue, and in many cases petechial spots, or large blotches upon the skin, were combined, evidently indicating a vitiated state of the blood: this continued during the time cholera prevailed, and many of the persons so affected contracted the disease.

Before entering upon the history of the disease itself, it is necessary to state that in the present paper those cases only are called cholera in which the countenance, voice, and collapse plainly indicated the disease. This is required, in order to estimate the amount of mor-

ality from the treatment pursued, for experience of the disease would seem plainly to prove that those who state that they have succeeded in curing all their cases, or nineteen out of twenty, and that too with such remedies as sulphur or soda, must either have mistaken severe cases of diarrhoea for cholera, or the disease must vary very much in point of malignancy in different localities. For to pretend that any remedy or course of treatment will cure so large a proportion of cases in a disease so rapidly fatal as that of cholera, would seem ridiculous in the extreme.

The disease first made its appearance in the town on the 10th July, in the person of an Irish labourer, residing in a damp, ill-ventilated, and badly lighted cellar, subjected to the privations of his class. This was at a time when the neighbourhood was free from cholera. The next case, July 31st, in Crosby Street, 21 days from the first, with whom he had no communication: this man was in comfortable circumstances, but exposed not only to the atmospheric influences previously mentioned, but also to the noxious vapours arising from the mouth of a drain, into which the blood and filth from a slaughterhouse was allowed to run. Six cases of cholera, and three of diarrhoea, afterwards occurred within forty yards of this drain. The third case, August 8, in Furnace Road, eight days from the last, in a person of extremely intemperate habits, and who is reported to have been drunk the day before, and to have slept all night in the open air. The house of this man was extremely filthy, and separated from a filthy middenstead by a thin wall. The fourth and fifth cases, the first on the 10th, and the other on the 15th August, one in Catherine Street, and the other in Crosby Street, neither of whom had had any communication with cholera patients; and the only assignable cause for the disease was the influence before mentioned. The sixth and seventh cases occurred in two adjoining rooms on the 21st August. The first, a prostitute, only fourteen days out of workhouse, but neither of them having been near cholera. The eighth, August 21st, in Strand Street, a case of consecutive fever, the patient having had the disease in Dublin. The ninth, August 29, a person in Back Street, in comfortable circumstances, having the day before left Workington, where the

disease at this time prevailed in a most malignant form, and having the day previously buried a niece who died of the disease. The tenth, August 31, a woman residing in Crosby Street. The eleventh, Sept. 1st, in Furnace Road, near to the third case which occurred on the 8th August. The twelfth, Sept. 8th, in Catherine Street, in a woman of intemperate habits. The disease did not spread in any of these families, though some of them very numerous; but a woman living in a cellar, in the same passage with the last, contracted the disease on October 25th: therefore, if she imbibed the infection from this person, there must have been a period of incubation of 47 days. The thirteenth, Sept. 11th, in Irish yard, at a distance from any of the above. The people living in this yard are filthy in the extreme, and the place is badly ventilated; one of this woman's children contracted the disease on the 17th October, and another on the 21st, several members of the family having premonitory diarrhoea at the same time. Another case of cholera occurred in this yard on the 4th November. The 14th, 15th, 16th, 17th, and 18th cases all occurred on the 24th September, in different parts of the first portion of the town; nor could any of them be traced to infection, but one was the manager of a temporary theatre erected on the low ground, and another of these people contracted the disease on the 9th October. After this time the disease may be said to have become epidemic amongst us, and owing to the number of cases there had been, and the different parts of the town attacked, it would be impossible longer to say, with any degree of certainty, who had been exposed to the infection and who had not; but of those who had communication with the last patients, three out of five residing in the same house contracted the disease, one on the 1st October, six days, and the other on the 2d October, seven days after, and the third on the 23d October; but this girl had again been exposed to the infection from the two last, and one of them having consecutive fever, which lasted until the 11th October: it is impossible to say at what time she might imbibe the infection. After this time one case occurred on the 25th Sept. in Crosby Street. Two on the 27th, one in Furnace and the other on Race Brow; and one on the 29th in Crosby Street. Oct. 2d.—

Two cases, one in Kirkby Street and one on Race Brow. Oct. 9th.—Two cases, one in Kirkby Street and one in Fleming Square. Oct. 17th.—One in Irish Yard. Oct. 18th.—One in Kirkby Street. Oct. 19th.—One in Kirkby Street. Oct. 20.—One in Furnace Road. Oct. 21st.—One in Irish Yard. Oct. 22d.—Five cases: four in Kirkby Street and one in Senhouse Street. Oct. 23d.—Eleven cases: five in Kirkby Street, one in Wood Street, one in Well Lane, three in Crosby Street, one in Senhouse Street. Oct. 24th.—Five cases: two in King Street, three in Kirkby Street. Oct. 25th.—Eleven cases: one in King Street, one Furnace Road, two Queen Street, three Kirkby Street, two Strand Street, one Catherine Street, and one Crosby Street. Oct. 26th.—One in Crosby Street. Oct. 27th.—Two: one in Fleming Square and one in Kirkby Street. Oct. 28th.—One in Kirkby Street. Oct. 29th.—Four cases: one in Furnace Lane, one in Queen Street, one in Senhouse Street, one in Church Street. Oct. 30th.—Two cases in Furnace Lane. Nov. 4th.—One in Irish Yard. Nov. 8th.—One in Crosby Street. Nov. 11th.—One in Crosby Street. Nov. 12th.—One in Crosby Street. Nov. 13th.—One in Senhouse Street. Nov. 19th.—One in Senhouse Street.

Of the above cases, sixty-eight occurred in the first portion of the town, and of these twenty-three in Kirkby Street, a short street situated on the south-east of the town, and exposed to the vapours arising from the low grounds: of these last, nine occurred in one small court, close to which is a filthy ash-pit, and eight of these occurred within twenty-four hours of each other, five in one family. The three families in which these cases occurred had been compelled by their landlord, fourteen days before, on account of their filthy habits, to remove from another part of the town, and the houses they lived in had been uninhabited for three months; and it is remarkable that though several families live in the same court, these alone, with one child in another family living immediately under them, contracted the disease. It is impossible to refer these cases, all occurring within twenty-four hours of each other, to infection, which, if that were the case, must have been imbibed by all these families at the same time, for one case followed another so quickly that it is im-

possible they could take the disease from each other; and I have never found, except in the cases about to be mentioned, that the disease spread directly from one house to another, although in some instances different families were living above, below, and on every side of them, and though they frequently visited the sick; but it would seem as if some families, either from the peculiarity of their mode of life or constitution, are more susceptible of the disease than others.

The cases which support most strongly the theory of infection are, first, the cholera nurses, one of whom contracted the disease twice, the first time on the 22d Oct., and the second time on the 13th Nov. The other contracted the disease two days after washing for the first time the clothes of a cholera patient; her two children also took the disease the day after: but this family being exposed not only to the same atmospheric causes with the others who contracted the disease in this portion of the town, but also to the influences which the greatest poverty and filth are known to exert in predisposing to disease, seem rather to have taken it from the combined influence of these than from the infection. The next and most decided case is that of the aunt of the first nurse, who lived in a part of the town where, until that time, there had been no cases of cholera, and who took the disease on the 20th of November, six days after exposure to infection.

From the commencement of the disease there have been 88 cases, three of which were in the adjoining villages. Of these 45 have died; but out of this number 10 died under the quacks practising in the town; and in almost every case the discharge and collapse had been allowed to go on unchecked for many hours, in the vain hope that the treatment pursued by these men would cure the disease,—namely, the vapour-bath as hot as possible, raspberry leaves, oak bark, made hot with cayenne pepper; and, if the patient should begin to get warm, he must have emetic doses of lobelia every two hours, *after which no further treatment will be required.* Of the 76 cases to which I was called 48 were suffering from collapse in its most severe form; five of these followed no treatment, except that of the quacks above mentioned, and all

died; five followed the same treatment until the collapse became confirmed, and then applied: three of these died, and two others were under the treatment of another practitioner. Of the 73 cases in which the following treatment was carried out by myself or Mr. Curtis, 31 died, but six of these lived less than six hours from the time they were first seen.

It is unnecessary to state the most usual symptoms and course of the disease; these vary, not only in intensity, but in some cases the most usual and most prominent are wanting; for in some cases the only discharge, from first to last, is sweating and vomiting; and yet the collapse, voice, and cramp, are plainly those of cholera. In another the case began with this profuse perspiration, which continued for twelve hours, with now and then an evacuation from the bowels, and then set in with all the symptoms of cholera in their most malignant form. In others the purging and sweating have been both absent, but the cramps, voice, and collapse, plainly indicated the disease. In the usual form of cholera the collapse goes *pari passu* with the vomiting, purging, and sweating; but in these cases, notwithstanding these last, are all wanting, except vomiting to a slight extent, still, there are the collapse, cramps, and peculiar voice of cholera, and sometimes to an extreme degree, plainly indicating that these do not depend upon the discharges alone. The first two or three cases were treated with Plumb. Acet. gr. iij.; Pulv. Opii, $\frac{1}{4}$ given every hour, together with brandy and other stimulants, at the same time that mustard poultices were applied over the belly, and hot bricks to the feet, &c.; but finding that the above did not arrest the discharges, in consultation with Mr. Curtis it was resolved to increase the opium to half a grain, and repeat it every hour or half-hour until the purging was stopped. Still, finding that the remedy was not quick enough in its effects, and stimulants appearing to have no effect, but rather to increase the vomiting, they were discontinued, and cold water allowed ad libitum. At the same time the quantity of opium in the pills was increased to one grain, and these taken every hour or half-hour, according to the state of the patient, the last taken as a

guide as to the frequency of the dose. But when the patient was found at the commencement with a tolerable pulse, two of the above were frequently given to commence with, and then one every half hour, until the purging and vomiting ceased, and reaction took place: and, though closely watched, opium was never found to act injuriously, as has been represented by many; and, in proof that it may possibly be given with safety in this disease in far larger doses than recommended above, one patient took at the commencement of the collapse six grains of opium, and eighteen of Plumb. Acet., her reason being "that if one pill would do good, six would do more;" and certainly it had desired the effect, the vomiting and purging being completely stopped from that time, nor did the patient suffer more from its narcotic effects than if, under ordinary circumstances, she had taken a single grain.

If the patient was seen before the collapse, this treatment seldom failed to arrest the disease; and even where the collapse was most severe, reaction frequently came on immediately after the first dose or two.

In those cases where the above failed to arrest the purging, one grain of opium with half a grain of Cupri Sulph. given every half hour, has done so immediately. In a number of the last cases, one grain of calomel was to each pill, but the difference in the effects of the remedy was imperceptible.

In those cases in which the opium failed to arrest the vomiting, hydrocyanic acid in minim doses was given; and if this also failed, creosote in the form of the Mist. Creosot. Edin. frequently had the desired effect.

In one of the first cases, where the collapse was extreme, and in which I was afraid to venture on the use of opium, owing to the strong objections which were urged by many practitioners against its employment in this disease, Plumb. Acet. alone was tried, but it appeared to have no control over the disease; whereas, in combination with opium, it seldom fails to arrest the purging; and I have frequently been called to patients in the stage of collapse where no opium had been given, and yet the patient was in the same drowsy state as in those cases in which opium had been given as recommended above.

Immediately the purging and vomiting ceased, the patient was left to the powers of nature; stimulants appearing rather to be injurious than otherwise.

Of the 19 cases of consecutive fever, 5 died, but of these 2 were very dissipated characters, and died from suppression of urine, one of them having suffered three months previously from general dropsy depending upon disease of the liver and kidneys. Another died of apoplexy, having had puerperal convulsions during her last confinement eighteen months previously. In the treatment of this stage of the disease, large and repeated doses of calomel given as a purgative were found most useful, other purgatives appearing to exert little or no influence over the dark-green contents of the bowels after this disease.

THE MEDICAL PROFESSION IN EGYPT. STATISTICS OF THE EGYPTIAN SCHOOL OF MEDICINE.

M. CLOT BEY has addressed to the Pacha a report of the progress of the Egyptian Medical School, from which we extract the following details:—

The school of medicine founded twenty-two years ago, has received, during that time, eight hundred and thirty-nine students. In six years from its opening a class of eighty-seven pupils had completed their studies. In five years subsequently, another of ninety-one; a third, of one hundred; a fourth, of one hundred and seventeen; and a fifth and last, of one hundred and twenty-seven recently left the school. The remainder have not yet completed their medical education. Of this number, three hundred and seventeen are employed in the army, navy, schools, workshops, docks, &c.

The obstetric school has been established only twelve years. At first the sole pupils were twenty-four negroesses. Subsequently poor girls were taken as pupils, and with difficulty sixty could be collected. Many of these are now practising with success in Cairo, Alexandria, and Damietta. The Mussulman prejudices against vaccination have disappeared, and the number vaccinated now amounts to from seven to eight thousand annually. The vaccine virus is also extensively distributed in the country villages and towns.—*L'Union Médicale*, Sept. 12, 1849. x

CASE OF
RAPID DECOMPOSITION OF THE
HUMAN BODY;

WITH REMARKS ON PUTREFACTION, AND
THE ALLEGED EFFECTS OF LIME IN
ACCELERATING THAT PROCESS.

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THE anomalies to which the process of putrefaction in the dead body is exposed are well known to medical jurists. In some instances a body will remain for many days without any change taking place in it; in other cases the chemical changes due to putrefaction, or the resolution of the organic into inorganic compounds, are manifested in a few hours. In cases of retarded putrefaction a belief generally arises that the person is not dead, but in a trance. The fact, however, is, that the body merely resists for a longer time than usual, those changes which every dead human body must sooner or later undergo.* Cases of rapid putrefaction are not uncommon, and are particularly observed *cateris paribus* in the bodies of those individuals who have died from debilitating diseases, or whose sanguineous systems are remarkably full of blood. It is not improbable that at the time of death the blood in such subjects is in a highly diseased condition.

The following case recently occurred in Guy's Hospital; the report has been drawn up for me by Mr. A. G. Osborne, an intelligent pupil who is now attending the lectures at Guy's Hospital:—

"Richard Ball, æt. 39, employed as porter in the brewing establishment of Barclay and Co. for many years past, residing in No. 21, Russell Place, Bedford Street, Great Guildford Street. Habits very intemperate; drank porter to excess, and did not refrain from spirits also. About five years since he broke his leg, and for two months was under Mr. Cooper's care in the hospital; and his health may be judged of by the fact that Mr. Cooper thought proper to allow him two or three minutes' rest daily during that time, on account of the weakness of it

mitted twice or three times between his discharge and the present time. He is described on his re-admission (Oct. 24th, 1849) as a stout fat man, with pale complexion, and with the general tissues of his body flabby. For twelve months past it seems he has had a cough, much aggravated of late; and about a week since he first observed blood in the sputa, which has continued at intervals since.

He is very feeble; pulse weak; bowels regular. No albumen in the urine. Distinct murmur over the left side of the sternum, but whether with first or second sound could not be ascertained. The nurse states that she did not observe his perspiration more than ordinarily disagreeable; and, if it had been so, she thinks she must have observed it.

On account of the dyspnoea and debility, Dr. Barlow ordered cupping and other remedies.

Oct. 25th.—Much the same. Towards evening his breathing became more distressed; and, at half-past ten o'clock P.M., he suddenly expired, his general symptoms during the day not having indicated immediate danger. The body remained in the ward through the night until eight the following morning, the temperature varying from 60° to 65°. Decomposition had set in unusually early, as even then, although little more than nine hours had elapsed, there were large bullæ, filled with sanguineous fluid, on the left side of the body; and, by half-past two P.M. on the 26th,—i. e. sixteen hours after death,—the corpse presented a most extraordinary appearance. The entire surface was more or less discoloured, blue or purple; the eyelids were bulged forward; the nostrils were filled with bloody froth, through which continued to issue minute bubbles of gas. The abdomen was tense from excessive distension, as a result of gaseous putrefaction; and the skin of the scrotum as tight as any artificial means could have made it. The groins, particularly the right, looked as though putrefaction had begun on parts much bruised during life, and very minute blood-vesicles appeared on the skin in several places.

On puncturing the skin of the scrotum, a jet of carburetted hydrogen was emitted, which burnt steadily for above five minutes, and the same took place over a puncture was made in the

* Some remarks at the end of this paper.

legs and abdomen. The highly offensive state of the body precluded a post-mortem examination, which was not considered necessary."

Mr. Osborne requested me to see the body *seventeen hours* after death. The process of putrefaction had still further advanced. The whole of the skin was tense; that covering the neck and face was so distended that the identification of the deceased from the features could not have been made. The skin was covered, throughout its whole extent, with blue, green, and livid red patches, and in some places phlyctenæ had been formed, and the cuticle had become removed. In fact, the appearance of the body was such as it is only common to find after the lapse of two or three days in hot summer weather, and after six or seven days when the thermometer is neither unusually high nor low. The state of the body corresponded precisely to what M. Devergie has described as the fourth or last period of change after dissolution,* and this, from his observations made on the dead bodies deposited at the Morgue, he fixes at from six to twelve days after death. I think most medical practitioners, if they had been required in this case to express an opinion of the time which had elapsed since death, would, from the putrefied state of the body, have referred it at least to an antecedent period of five or six days, considering the season of the year. The whole of these changes had, however, taken place in *seventeen hours* from the time of death. Such a case of course conveys great caution in forming a medical opinion.†

The gases which issued in jets from every part of the skin which was pierced, were highly offensive. When a flame was applied to the puncture the gas burnt suddenly with almost explosive violence. The flame which issued from the aperture was like that of the proto-carburetted hydrogen. The stream of gas did not discolour a slip of paper moistened with acetate of lead, nor did it produce any change on paper dipped in nitrate of silver. Hence it was un-mixed with sulphuretted or phosphuretted hydrogen. The carburetted hydrogen was combined with other

gaseous products of putrefaction, the nature of which has not yet been determined.

The cause of this rapid access of putrefaction in the body of an individual dying in the prime of life, and at a season of the year when the process is considered to be slow in its appearance, may be assigned to two circumstances,—1st, to its having been exposed soon after death to an atmosphere at about the temperature of 65°; and 2nd, to a morbid or diseased condition of the solids and fluids of the body, which may have rendered them more readily susceptible of chemical changes. The intemperate habits of this man, and the excessive quantity of alcoholic liquors which he drank, may have tended to produce changes in the condition of the blood and fluids which would render them easily liable to decomposition (other circumstances being favourable) so soon as the breath had left the body. The exposure to the temperature of 65° ceased when the body was removed from the ward,—i. e. in less than ten hours after death,—but putrefaction had then already commenced; and it is well known that when this process has once begun, it continues to spread with great rapidity, even when the conditions of exposure subsequently are less favourable to its continuance.

In this case the whole history is known; but in regard to the bodies of persons found murdered, the facts which are necessary to form a correct judgment cannot, of course, be ascertained. Let us suppose that a body in such a state had been found buried beneath the floor of a room, and a medical man had been asked to assign the period of death,—he might, from common experience in such matters, have declared it to be impossible that the body could have been living within *twenty-four hours* of the time of its discovery; and suspicion might be thus removed from persons really guilty of murder, because it could perhaps be clearly proved that they had not been in or near the premises until within a day of the discovery of the body. An innocent person seen in company with the deceased five or six days before, might, on the other hand, be unjustly suspected of having been accessory to his death.

This supposed case is not taken for

* See Lectures in Medical Gazette, vol xxxviii. p. 186.

† See Lectures in Medical Gazette, vol. xxxvii. p. 1065.

the purpose of throwing doubt upon medical opinions, but to suggest great caution in forming them.

The causes of putrefaction, and the circumstances which accelerate or retard its appearance after death, have not yet been sufficiently investigated, and they are therefore but very imperfectly understood. I have elsewhere published* several cases which show that questions of vital importance to accused persons often depend on a knowledge of this subject on the part of the medical witnesses examined. The evidence of non-medical witnesses in reference to putrefaction can never be safely admitted; and yet, in Courts of Law, questions are sometimes put to them on the rapid or slow access of putrefaction, and their answers, given of course at random, are made use of, if apparently available, by counsel for the prosecution or defence.

An instance of this kind occurred at the trial of a woman named Geering, at the Lewes Summer Assizes, 1849, for the murder of her husband by poison. The deceased, Richard Geering, died on the 13th September, 1848, and his body was examined, by order of the coroner, on Friday, April 27, 1849, after an interval of rather more than seven months. As usual in cases of arsenical poisoning, the body was, on the whole, well preserved. The abdominal viscera were certainly in a remarkable state of preservation; and that arsenic was the cause of death was rendered clear by chemical and pathological evidence. The substance of the heart was quite firm, and arsenic was found in it. Mr. Ticehurst, of Hastings, who referred the case to me, observed that when the body was removed from the coffin, the face and upper parts were very much decomposed.

In the defence it was suggested that the preservation of the body was to be accounted for by the fact that when the deceased was buried, a slab of wood was placed immediately above the coffin to keep the earth from it; and the village undertaker, who deposed to this fact, said, in answer to a question put by counsel for the prisoner, that this would have the effect of preserving the body for a longer period. It need hardly be observed that a slab of wood could

have no such influence on the process of putrefaction as that which was here suggested; and as only that part of the body was preserved in which the arsenic was discovered, it is clear that this substance must have been the real cause of the preservation of the abdominal viscera.

Effect of lime on putrefaction.—There are some substances which, it is well known, have a tendency to prevent putrefaction; while, on the other hand, there is one which, by popular repute, possesses the extraordinary power of accelerating this process. The substance to which this property is assigned is *lime*. At the recent trial of the Mannings, one of the medical witnesses is reported to have said that he had no doubt, when he saw the body of the deceased O'Connor, it must have been under the ground a week at least. He formed this opinion from the state of extensive decomposition in which he found it. The examination, as reported in the daily journals, then proceeded:—

“Q.—In forming your judgment, did you take into consideration the fact that *lime* had been used?”

“A.—I did; the lime would certainly cause the body to decompose quicker.

“Q.—Taking into consideration the quantity of lime used, can you still form an opinion as to whether the body had been under ground for a week or less?”

“A.—I have no doubt whatever that it was there for a week.

“Q.—Would not the effect of lime be to disfigure the features very much?”

“A.—Yes; and a stranger might not be able to trace them.

“Q.—Would the external application of lime make any difference with respect to the decomposition of the brain, which was found in a fluid state?”

“A.—The lime might be absorbed through the fractures of the skull, and so cause the decomposition of the brain.”

The medical opinion in this case respecting the period during which the deceased had been dead, was fully confirmed by general and circumstantial evidence. There was nothing to impugn its correctness. The only question is, whether effects were not here attributed to the use of lime which were really due to the natural process of decomposition. It is said that the prisoners procured lime in a fresh burnt state, and

* Lectures in Medical Gazette, vol. xxxviii. p. 184.

plaked it over the body of the deceased. The substance would in this case act by the heat evolved, the effect of which would be again counteracted by the use of much water and the speedy covering of the body with earth. I have been informed that so much water was employed that the lime was found quite in a plastery state; and there was no evidence of the marks of burning, as a result of the use of lime, on any part of the skin.

The case related at the commencement of this paper shows that putrefaction may take place very rapidly where *lime has not been used*; and it becomes therefore necessary to inquire whether this substance really possesses any influence whatever in accelerating or modifying the process. Some years since, the body of a child in a case of suspected infanticide was brought to me for examination. It had been placed in a box, and covered with lime. The body, considering the period of death and the season of the year, was in a better state of preservation than might have been expected. The abdomen and lower extremities, which had been completely covered with powdered lime, were very well preserved. There was certainly nothing to shew that in this case the lime had had any influence whatever on the process.

I am unable to find, in any work relating to the signs of death, facts which tend to bear out the popular belief that lime accelerates putrefaction. By the strong affinity of this alkali for water, as well as by its chemical power of fixing carbonic acid, sulphuretted hydrogen, and other animal effluvia, it is admirably adapted to prevent the escape of these effluvia from a putrefying corpse; and, when placed in a coffin or a grave, it will then to a certain extent exert a beneficial influence.

On the unbroken human skin, powdered lime appears to have no corrosive or chemical action whatever. It is the least soluble of all the alkalies, excepting magnesia. A stiff cream of lime possesses no corrosive properties on the skin,—while solutions of potash, soda, and ammonia, even when considerably diluted, rapidly dissolve it. Potash and soda, however, by this well-known action on animal matter, do not accelerate putrefaction: they merely act chemically by combining with and dissolving the

tissues; and, were lime more soluble than it is, it would probably soften and dissolve the soft parts of the body.*

The following experiment shows what its influence is on the raw flesh of a recently dead animal. Two pieces of beef, the one (A) covered with powdered lime which had become partially slaked by exposure to air, and the other (B) left uncovered in its raw state, were exposed to the air of an apartment at a temperature of about 55° for fourteen days. In the course of four days the uncovered piece of beef (B) was very offensive from putrefaction. The piece which had been covered with lime (A) had also undergone decomposition, but the effluvia had been so retained by the lime that no odour was perceptible except within a few inches. The uncovered beef (B) at the end of a fortnight had become somewhat dry on the surface, from evaporation, but it was much putrefied, and very offensive. The piece covered with lime (A) remained soft, and quite firm in the fibre: it had an offensive smell at a short distance, modified evidently by the action of the lime; but there was no appearance of corrosion, no chemical softening of structure, nor any change of condition to indicate that putrefaction had been at all accelerated or even modified in it. When closely examined, the external surface had acquired a greenish colour, but this was apparently due to the chemical effect of the alkali on the hæmatosine.†

This green colour was found to be only superficial; for within, the muscular fibre had a dark-red brown colour, like that of the uncovered beef (B). After the lapse of three weeks, B had become much reduced in bulk by evaporation, while A, the beef covered with lime, still remained soft, and retained all the toughness of fibre peculiar to it. There was not the least sign of corrosion, or of any chemical action,

* Lime is largely used in the cleansing of skins for tanning: it has no chemical or corrosive action on them, but merely serves to combine with and remove the fat.

† The green colour of the skin and muscles during putrefaction is probably owing to the evolution of ammonia and the action of this alkali in a nascent state on the red colouring matter of the blood contained in the minute vessels. It appears first on the skin of the abdomen, probably from the decomposition of the contents of the intestines, and is one of the most striking signs of real death.

excepting the slight superficial change of colour above adverted to. At the end of five weeks both pieces had become perfectly dried, as a result of evaporation, and putrefaction had become entirely arrested. The piece A, which had been covered with lime, was as hard and firm as a piece of wood, and broke with a brittle fracture. The piece B retained a certain degree of toughness. There was no loss in either, except that which had arisen from mere evaporation and shrinking.

Judging from the result of this experiment, although lime cannot be said to retard, there is no proof that it accelerates or even modifies the process of putrefaction. With the exception of changing the colour of the blood to green in parts denuded of skin, it appears to exert no other influence on the process than that produced by chalk, clay, or any other insoluble powder laid over dead animal matter: it cuts off to a certain extent the access of air, and, if used in a very thick layer, it would thereby rather tend to retard than to quicken putrefaction. It prevents evaporation for a certain period, so that the animal matter remains soft for a longer time; but, in the end, the water is absorbed, and the animal substance becomes hard, dry, brittle, and imputrescible.

It appears to me that there is an entire want of evidence that lime under any circumstances quickens putrefaction. This process is essentially dependent on *heat*, *moisture*, and *air*, and according to the presence or absence of these conditions, so is the process rapid or slow. The three conditions must co-operate, or putrefaction will be arrested. Thus a *temperature* of 32° or of 212° puts an end to the process. As to the effect of *moisture*, I have found that albumen—a substance which putrefies in a few hours—may, when deprived of its moisture by chloride of calcium, be kept without any change for twenty years exposed to the air at the most favourable temperature for putrefaction. The effect of *air* is entirely due to oxygen. In an experiment performed some years ago, a piece of beef was perfectly preserved for *two hundred and sixty-four* days, through all changes of temperature during this long period, without putrefying. This was effected by merely suspending it in a bell-jar containing deutoxide of nitrogen gas, which, as it is

well known, acts by preventing the access of oxygen.

The popular idea that lime quickens putrefaction has probably arisen from the supposition that it was used with this view in coffins and graves. Its action, however, is really that of preventing the diffusion of noxious effluvia; and for this purpose, by its rapid combination with carbonic acid, sulphuretted hydrogen, phosphuretted hydrogen, and animal effluvia generally, it is admirably adapted. In an experiment recently performed, it was ascertained that a drachm and a half of slaked lime removed in ten minutes the whole of the sulphuretted hydrogen and carbonic acid from forty ounces of foul sewer water, which before the addition of the alkali evolved sulphuretted hydrogen in large quantity. In this respect it was found to be much superior to the chloride of zinc, which at the best can only remove a part of the sulphuretted hydrogen, and does not at all affect the other offensive effluvia.

Lime will be found a very cheap, safe, and useful deodorizer. Its value as such does not appear to be sufficiently known.

Retarded putrefaction, Apparent death, and Premature interment.—Although it is not my object in this paper to consider the question of *retarded putrefaction*, I may here advert to the strange superstitions to which this condition of the dead body has given rise. During the late fatal prevalence of cholera, several cases of retarded putrefaction occurred, and produced some popular excitement in their respective localities, from the dread of premature interment. A remarkable case of this kind occurred at Bristol in October 1849, in which a youth died from an attack of cholera in about fourteen hours. After the lapse of forty-eight hours, it is stated that the warmth of the body was perceptibly retained, and there were no signs of putrefaction. This process, however, ultimately manifested itself. It is as difficult to say why, in this and other similar instances, the laws of chemistry should have been so long suspended, as why, in the case described in the paper, they came into premature operation,—the persons having died in the same season of the year, and within a few

A wild superstition formerly existed in Eastern Europe, and is said still to prevail in Wallachia, to the effect that the bodies in which putrefaction was thus retarded were nourished and preserved by sucking the blood of the living, and to this the name of *Vampirism* was given. As a mere effect of panic, the prevalence of this popular belief led to numerous deaths: those who died were hastily buried, and the bodies of suspected persons were disinterred, and, if found undecomposed, were staked or burnt! Dr. Herbert Mayo, in a remarkable work lately published (*Letters on the Truths contained in Popular Superstitions*), although he has shown the absurdity of this superstition, has suggested an explanation, which, however, is likely to excite in many of his readers a fear of premature interment. His conclusion is, "That the bodies which were found in the so-called Vampyre-state, instead of being in a new or mystical condition, were simply alive in the common way, or *had been so for some time subsequently to their interment*; that, in short, they were the bodies of persons who had been buried alive, and whose life, where it yet lingered, was finally extinguished through the ignorance and barbarity of those who disinterred them." Such a statement, proceeding from one who has attained a high rank as a physiologist, is certainly calculated to excite our surprise. The cases which the writer quotes, refer to the bodies of persons exhumed after having been buried for periods varying from *six to twelve weeks*! Can any physiologist seriously believe that a human body can preserve its vitality when screwed down in a coffin and buried in a grave for a period of six weeks? If not, what is the meaning of such bodies being "simply alive in the common way?" The hypothesis that they had been alive for some time subsequently to interment is equally untenable; for, unless vitality continued to within a few days of exhumation, we should still have to account for the absence of the signs of putrefaction. Admitting the fact that a person may be suffocated in his coffin, this would not explain why his body should resist the ordinary chemical changes which, sooner or later, invariably follow death. "Death-trance," (according to Dr. H. Mayo) is, however, a positive status: a period of repose, the duration of which is sometimes definite and predetermined,

although unknown. Thus the patient, the term of the death-trance having expired, occasionally suddenly wakes, entirely and at once restored. Oftener, however, the machinery which has been stopped seems to require to be jogged, then it goes on again. The basis of death-trance is *suspension of the action of the heart, and of the breathing, and of voluntary motion*; generally, likewise, feeling and intelligence, and the vegetative changes in the body, are suspended. With these phenomena is joined loss of external warmth, so that the *usual evidence of life is gone*." (p. 34.) It appears clearly from this statement that the author makes no distinction between life and death. All the phenomena of life may have ceased; and yet, if from any circumstances the decomposition of the body has been retarded, it may be contended that the person is not dead, but in a death-trance. Dr. H. Mayo has, it appears to me, overlooked a simple explanation of these cases, which would render the adoption of his hypothesis unnecessary. If, as in the case of the youth at Bristol, there is no tendency to rapid decomposition, and the body be buried within twenty-four or thirty-six hours, it will remain unchanged in the coffin for a considerable period; for by the act of interment it is withdrawn from the air and kept at a cool and uniform temperature. In all interments which take place during the winter season, the bodies remain for a long period unchanged in the grave. This would be the Vampyre-state of the Wallachians, or the death-trance of Dr. H. Mayo. It is strange that some philosophers will thus pass over simple facts, in order to give a mystical and alarming interpretation to plain natural phenomena; but when it is roundly asserted that the continuance of life in a human body is compatible with arrested circulation and respiration, with a cessation of voluntary motion, feeling, and intelligence, and a loss of (external) warmth, it is only a slight additional step to adopt any hypothesis which partakes of a marvellous character. It is a mere quibble about words: that which Dr. H. Mayo calls death-trance is what is understood as death by all other physiologists. The entire absence of the ordinary signs of life is insufficient, according to Dr. H. Mayo, to prove the absence of life,—a proposition which may be granted in reference to a few

hours of time; but it would be unreasonable to adopt the writer's rule, and judge of death by the absence of *one* sign only, instead of taking them in their totality, and in their ordinary sequence. Premature interment is a condition which need not be dreaded in this country, where every necessary precaution is taken even with the corpse of the unclaimed pauper; and it is to be regretted that otherwise well-informed professional men should strive to keep alive a groundless fear in the public mind by their want of attention to the curious exceptions to which experience shows the process of putrefaction to be liable. The reader will find an admirably written article on this subject in the *Quarterly Review* for September 1849, p. 346.

ANOTHER DEATH FROM CHLOROFORM.

A DEATH from chloroform lately occurred in Berlin, and made a great sensation. A young lady died two days after an unsuccessful attempt had been made to extract a tooth while under anæsthetic influence,—the reaction, it is said, operating upon the brain. The dentist has been examined before the judicial authorities, and charged with having administered the drug without the presence of a surgeon or physician, as required by law,—not that such authorization would have saved the patient, but “the law allows it, and the Court awards;” and the effect will be to check the indiscriminate and indiscreet use of chloroform, which is here as fashionable as it seems to be in your northern capital. It has also given rise to many discussions among scientific men. Langenbeck, the successor of Dieffenbach in the University Clinic, and formerly Professor at Kiel, has availed himself of the opportunity to publish his “experiences” on the matter. He has used chloroform in all ages—in the child of a few hours old, and in patients of 80 years of age. He has had but one death from it, and that in a sailor with comminuted fracture of the ankle, requiring amputation. While tying the artery, Langenbeck observed black blood and gas bubbles issuing from the wound, and the patient died half an hour after the operation. The same occurrence also lately took place in *La Charité*, during the operation for excision of the lower jaw. On dissection, much black and frothy blood was found in the right heart.—*Medical Times*.

MEDICAL GAZETTE.

FRIDAY, JANUARY 4, 1850.

THE campaign of Medical Reform for 1850 has been opened by Mr. Syme, President of the Royal College of Surgeons of Edinburgh, in the form of a Letter addressed to the Lord Advocate of Scotland.* We willingly do Mr. Syme the justice to state that he has argued this very difficult question in a most temperate manner, and that he has succeeded in clearly pointing out the causes which have hitherto obstructed medical legislation. In some parts of his essay it appears to us that he takes an erroneous view of English educational institutions, and falls into the error of condemning the many for the misdeeds of the few; but setting aside this objection, he has done good service to the Medical Reform question by the publication of his pamphlet.

Mr. Syme especially denounces the privileges exercised under their act by the Apothecaries' Society. Whatever amount of education a man may have received out of England and Wales, and however rigorous the examination he may have undergone with credit to himself, practice in this part of the United Kingdom is strictly forbidden by law under a heavy penalty.

“Hitherto,” observes Mr. Syme, “it has been found a difficult and expensive process to obtain convictions for such offences, in consequence of certain legal technicalities, with which it is unnecessary to trouble your Lordship; but from various cases of recent occurrence, it appears that the establishment of ‘County Courts’ has removed these obstacles, and rendered any attempt to

* Letter to the Lord Advocate of Scotland, on Medical Reform. By J. Syme, F.R.S.E., Professor of Clinical Surgery, the Royal College of Surgeons of Edinburgh.

trench upon the Apothecaries' province, without their license, sure to incur punishment. Now, nearly the whole medical practice of England, of a general or family kind, is in the hands of those who supply the medicines which they prescribe, and are, in fact, remunerated for professional services by the price attached to their drugs. *At present, therefore, it is obviously impossible by any extent of education or examination in Scotland to obtain the right of medical practice in England.*

The proposition which is put in italics by the writer, is one that deserves the serious attention of all who are interested in the subject of medical legislation. In a kingdom which is called "United," there is no good reason why such an exclusive restriction should exist in favour of the examinations instituted by a body of men who have never been directly concerned in imparting medical education, who have acquired their position as examiners, not by their labours in the field of science or by their professional position, but as a result of corporate influence and commercial privileges, and whose names are scarcely known to the profession. The graduates of the Universities of Scotland and Ireland, however, are not the only parties who suffer by this restriction; hence Mr. Syme need not have gone out of his way to inquire whether the exception was owing to any inferiority or defect in the means of medical education north of the Tweed. The graduates of the University of London who pass through a curriculum, and undergo an examination on *all* branches of medicine from which most of the candidates for the Apothecaries' license, and even the Society's Examiners themselves, would shrink, are equally prohibited by law from practising in England and Wales, until they have obtained an Act-of-Parliament-license at Blackfriars. The members of the Royal College of Surgeons are equally cut off from *medical* practice, until they have procured the

license. The injustice, however, is not so great in this as in the former case; for it is well known that the College requires only *certificates* of attendance on medicine, materia medica, and therapeutics, &c. The examiners of the Royal College do not test the knowledge of their candidates in these branches of medicine, all of which are essential to a good surgical education, but they leave this to the judgment of the unknown gentlemen who constitute the Board of Examiners at Apothecaries' Hall. It is at the same time optional with the candidates for the diploma of the College of Surgeons, whether they will lose any time in the *study* of medicine, chemistry, therapeutics, &c. &c. In order to obtain the diploma of the College, they must be well grounded in anatomy, physiology, and surgery; but with respect to the other courses of study, the printed certificates alone suffice. It is clear, therefore, that the members of the College have no just ground of complaint, if they are debarred from general practice until they have gone before the Apothecaries' Society; and in this great defect in the examinations at the Royal College of Surgeons, we have unfortunately the strongest argument for the continuance of the Worshipful Society as an examining Board. The truth is, *that* which is well performed by one examining Board in Scotland is here consigned to two;—a man has his knowledge of anatomy, physiology, and surgery, tested at the College, and his knowledge of medicine, chemistry, and therapeutics, tested in a certain way well known to grinders, at Apothecaries' Hall. Both of these bodies require by their regulations that candidates shall have attended lectures upon subjects upon which they either do not profess to examine, or are quite incompetent to institute an examination. Under these circumstances it is rather difficult to determine which body takes the more in-

consistent part. Thus the examiners of the College do not profess to examine their candidates in the Practice of Physic, Chemistry, Materia Medica, and Midwifery, but they require printed certificates of attendance. It would, we think, be rather difficult to reconcile this order for the mere production of printed certificates with the requisites of a good surgical education; for the certificates may be readily procured by one who has either not attended the lectures, or who has attended them without the slightest benefit. The candidate works only for Anatomy, Physiology, and Surgery, i. e. for the subjects on which he knows he will be exclusively examined.

On the other hand, the Apothecaries' Society require attendance upon all subjects except Surgery and surgical practice, and profess to examine on Anatomy and Physiology. What their examinations amount to on these important parts of a surgical education, may be easily determined from an inspection of the numerous *vade-mecums* which are published for the purpose of carrying candidates safely through this fiery ordeal. Let us now look to the anomaly which results. The double examination, which is really indispensable to *general practice*, is entirely optional! The diploma of the College carries with it honour, but no legal right to practise in England and Wales except as a *surgeon*. The license of the Society carries with it no honour, for most men are ashamed of it, and drop the title of "Apothecary;" but it gives to the holder a power of practising exclusively throughout England and Wales, ostensibly as a compounder and prescriber of drugs, but really as a *surgeon, physician, or in any capacity* which the person pleases to select. The cost of the Apothecaries' license is much less than that of the diploma of the College. This, together with the

exclusive practice, confers a very unfair advantage on the holder: we say unfair, because, by the possession of it, an individual can pass himself off to the public as a surgeon, and practise as such to the injury of members of the Royal College of Surgeons, when he may not have attended surgical lectures or practice, and not have undergone any examination on the subject. It is widely different with the members of the College. A small minority practise surgery in a pure form, but there is not one who can dispense with a knowledge of medicine, materia medica, or therapeutics. Mr. Syme tells us that "the whole of Scotland at present contains not more than *three or four physicians*, practising only as such, and but *one surgeon* who devotes his attention exclusively to surgical cases. In all England (he remarks) there is not, so far as I know, one *pure* surgeon out of London." In short, surgery and medicine are so closely bound together, that the greater number of the members of the College could only live by practising both. If, however, a member of this College should omit to provide himself with the Apothecaries' license, he is constantly exposed to the risk of prosecution; and herein we think the law of England has a most unjust operation. It permits the licentiate of the Apothecaries' Society to encroach with impunity upon the territory of Surgeons, by not making the College diploma indispensable to practice; while it forbids the surgeon under a heavy penalty to deal with any medical case. This is a gross and scandalous piece of injustice as it concerns the profession, and a palpable injury to the public: for the possessor of the Apothecaries' license has no more right to call himself a surgeon, or practise as such, than Eisenberg or any other ultramarine chiropodist.* But the

* A glaring instance of this abuse has lately come under our knowledge. A possessor of the

license shields him: it gives him one professional status, and thus enables him to assume with impunity another for which this license was not intended. In short, the *pure* licentiate of the Hall, while he is not compelled to study *surgery*, and undergo an examination on the subject, makes use of his license as a cover for practising as a surgeon; and while he is thus protected by law, the graduates of the University of London, or of any of the Scotch or Irish Colleges, although forming a more highly educated class of men, are liable to a heavy penalty if they deal with a case on which their knowledge has really been tested by a competent Board of Examiners. Unfortunately, we cannot add to this list the members of the College of Surgeons, because, as we have already remarked, they are turned over to the Hall for examination in subjects on which their own College should exercise the power of examining them. Hence, if they practise in defiance of the Apothecaries' Act, they must equitably take the consequences. It is creditable to the greater number of English medical practitioners, that in spite of the temptations to keep to the license of the Hall alone, they take out the diploma of the College; and it appears to us that, until some new arrangements have been made for the licensing of practitioners on *medicine* and *surgery*, no one should be allowed to practise who had not undergone an examination both at the College and Hall. It is only by such a rule,

license, of twelve years' standing, but *not a member of the College*, attended a case of fistula lachrymalis, in a highly respectable family, the members of which believed that he was a duly qualified surgeon. He took his guinea fees at each visit, and received on three several occasions a much larger fee. Medicines were supplied from *his* druggist. Here, then, was a man practising in a branch of the profession, for which, during twelve years, he had taken out no legal qualification, and his license gave him only power to prescribe and dispense medicine, but not in surgical cases. The toleration of this practice is not only an injustice to the public, but it is an injury to the great body of qualified surgeons possessing the diploma of the College.

which is now spontaneously adopted by a large number of candidates, that the public can be guarded against the malpractices of half-educated men. No man can be a safe general practitioner who has not passed through both ordeals: but he may at any time become a legalized general practitioner by taking only the Hall license.

We have here endeavoured to expose one great difference which exists between the systems of medical education and examination pursued in England and Scotland. Mr. Syme may fairly complain of the injustice done to well-educated Scotch practitioners by excluding them from practice in England and Wales under the Apothecaries' Act—an act which empowers a most defectively constituted examining body to license candidates nominally to practise as apothecaries, but virtually to act as surgeons in all cases which present themselves, although neither surgery nor surgical practice forms any part of the Apothecaries' curriculum. It is a scandalous system, which every enlightened practitioner throughout Great Britain would repudiate as unjust to professional men living under the same sovereign, speaking the same language, and professedly governed by the same laws. Such a system cannot find defenders except among those who would sustain a pecuniary loss by its abolition.

The Apothecaries' Act, therefore, is not merely a Scotch and Irish, but an English grievance, although Mr. Syme appears to entertain the notion that it is in especial favour in this country, and that it is supported by the English medical schools.

"In countries so united as England and Scotland, such an exclusive restriction in favour of the former could be justified only on the ground of the latter being defective or inferior in the means of instruction. But so far from this being the case, it will be found, that whether the supply of instruction

or the demand for it be made the criterion of judgment, the medical schools of Scotland must be conceded a higher place than those of England. In England there is not a single teacher in any medical school appointed by Government, while in Scotland there are no fewer than twenty holding royal commissions as professors of the various departments of medical study. In England there is not a single medical school supported or recognised by Government, while in Scotland the three great medical seminaries of Edinburgh, Glasgow, and Aberdeen, have not only received large grants of the public money for the erection of their buildings, but annually draw allowances for their libraries, museums, gardens, and professors' salaries. The university with which I have the honour of being connected has received upwards of £100,000 for completing the college buildings, and £30,000 for the support of the botanic garden, besides £575 a year for the library, and £500 for the salaries of the five medical professors. Nearly £100,000 has been bequeathed to the principal and professor for promoting, as may seem best to them, the prosperity of the establishment. Large collections, illustrative of anatomy, natural history, *materia medica*, and other departments of education, have been formed; and a wide field of practical study is afforded by the Royal Infirmary, which being resorted to by patients not only from every part of Scotland and its islands, but also from the north of England and Ireland, is believed to present a greater variety of subjects for observation than any other hospital in Great Britain. All the medical teachers in the Edinburgh University, not appointed by the Crown, are chosen by the Lord Provost, magistrates, and town council—not as in London, merely from the pupils of the schools, or rather the still more narrow circle of aspirants, who by filling in succession the position of dressers, assistants, demonstrators, or other subordinate places, are regarded as having a claim to preference;—but with perfect freedom of selection, and without any admission of respect being due to local connection. In so far, therefore, as the standing in national importance, the appointment of teachers, and the means of instruction are concerned, it must be

admitted that the University of Edinburgh, and other similarly constituted medical schools in Scotland, are at least nowise inferior to those of England.”

We quite agree in the proposition that the University of Edinburgh, and other similarly constituted medical schools of Scotland, are in no way inferior to those of England. The curricula of the University and of the Royal College of Surgeons of Edinburgh are, in our judgment, far better adapted to give a complete *medico-chirurgical* education than the curriculum of the Apothecaries' Society; and so long as the examination at the College of Surgeons of England is not made compulsory on every English practitioner, we do not hesitate to say that the public safety would be better consulted by admitting to general practice the Scotch graduates, rather than those English licentiates who have only qualified themselves as pure apothecaries according to law by obtaining the license of the Hall. We hardly know what Mr. Syme intends to prove by the fact that in English medical schools the teachers are not appointed by Government, and that they do not hold royal commissions as professors, &c. The English medical teachers would by no means object to some of the pecuniary favours which have been thus liberally shown to Scotland, being extended to themselves. Mr. Syme cannot mean to assert that the London schools have not teachers who are as deserving of these Government honours and endowments as their Scotch brethren; and therefore we take it he intends this remark as a timely hint to the Lord Advocate to equalise matters in the two parts of the United Kingdom, so that one-half of the twenty Scotch endowments may be transferred to the impoverished occupiers of chairs in the principal medical schools of the metropolis. He shows, too, in a striking point of view, the shameful one-

sidedness of our Government in supporting and recognising "the three great medical seminaries of Edinburgh, Glasgow, and Aberdeen," which he tells us "have not only received large grants of the *public money* for the erection of their buildings, but annually draw allowances for their libraries, museums, gardens, and *professors' salaries*." He then enters into details, and informs us that the University of Edinburgh alone has received upwards of £100,000 for completing the college buildings, and £30,000 for the support of the Botanic Garden, besides £575 a year for the library, and £500 for the salaries of five medical professors! All this is very tantalizing to the unfortunate London teachers. The fact that such liberal grants and endowments are made to *Scotch* medical schools and teachers, while they are sternly denied to *English* medical schools and teachers, shows that reform must take a wider scope than Mr. Syme has conceded to it in his pamphlet. English medical teachers have not only to struggle on without Government endowments, but their funds are too often made a subject of peculation for the support of hospitals or hospital functionaries not concerned in teaching. A large per centage is often deducted for the support of buildings, libraries, museums, &c.; and with all these mysterious deductions from their fees, they are expected to pay the expenses of their lectures. We decidedly object to this exclusive restriction of bounties, endowments, &c. for the benefit of the Scotch medical schools; and we commend Mr. Syme for his candour in bringing the subject so prominently before the public and profession. It is assuredly the duty of a wise government to abolish unjust privileges, and either to give an equal support to *all* educational institutions, or to allow them to shift for themselves. If the Apothecaries' Society enjoy an

unfair monopoly of practice south of the Tweed, it is clear from Mr. Syme's pamphlet, that the Scotch medical Colleges enjoy an unfair monopoly of valuable endowments north of that river; and before condemning the English medical schools for the want of such artificial support, it is only fair that we should have an opportunity of judging how the Scotch medical seminaries will work without it. Mr. Syme will, no doubt, agree with us; for he cannot declare himself a "Protectionist" in Scotland and a "Reformer" in England. His pamphlet contains many suggestions in reference to the anomalous state of the profession, and the remedies to be applied for the removal of abuses. We shall, therefore, take an early opportunity of returning to it.

Reviews.

On Stammering and its Treatment. By BACC. MED. OXON. 8vo. pp. 64. London: Churchill. 1850.

THE author of this essay has, by its publication, conferred a boon on a large class of his fellow creatures. Hitherto the subject of stammering has been too much neglected by those most able to elucidate its nature; and the treatment of it has, in consequence, unhappily been but too commonly committed to fanciful theorists or empirics, rather than to the ordinary professional man. The only method of remedying this evil was for an enlightened mind to submit the whole subject to a careful and scientific investigation, and to establish a certain mode of treatment, founded on the results of his inquiry. Such an investigation has been entered upon by the writer of the essay before us, and, in our judgment, he has succeeded in his undertaking.

The author's view, to state it briefly, is, that of the four great elements or faculties necessary for speech—viz. the mental act of forming and arranging ideas, a will to give these ideas utterance, a "motor nervous system" capable of obeying (or rather of transmitting)

the dictates of the will, and a vocal apparatus through which the mandates of the will can find expression: the *third* is that which is faulty or deficient in the stammerer. The first is obviously not in fault, for that would indicate mental unsoundness, which does not necessarily exist in the stammerer. Equally obvious is it that the fourth is not in error, for this is shown in the simple fact that when alone or at their ease very many, if not all, stammerers can speak as fluently as other people; the essay, indeed, pre-supposes this condition more or less. That the second element, namely, the will or desire to speak, is also unconnected, as a cause, with this peculiar defect of speech, does not so easily admit of proof; but the author is probably correct in believing that *originally* it is not at fault, though it may become so subsequently, and thus, especially when combined with the mental anxiety resulting from the infirmity, be the means of aggravating the original evil. The principal argument which he adduces in favour of this view is, that infants who hereafter become the subjects of stammering, do not manifest any spasmodic utterance until the "motor system" is called upon to combine articulative with laryngeal efforts.

The third, then, as already observed, is the element of speech originally at fault in the stammerer.

"My belief is, that stammering *originally* arises from an infirmity in the third element of speech, namely, the *motor nervous power*: that there exists in some individuals an idiosyncrasy amounting probably only to a too great irritability or sensibility of fibre in that part of the brain or ganglia, as well as their efferent nerves, which control the motions requisite for speech, and that this peculiarity exposes it to be most easily disarranged, and *driven with spasmodic action by the ordinary mental desire to speak.*" (p. 27-8.)

This peculiar "irritability of fibre," which seems to be the cause of the spasmodic muscular action, the author attributes, most correctly we think, to an excessive nervous susceptibility, probably hereditary, or at least congenital, and similar in kind to that which predisposes to chorea and some other spasmodic affections. Thus, we sometimes see stammering will attack one member of a family, and chorea another. Stammering, too, is sometimes one of the

accompaniments of chorea: and we have recently witnessed a still closer relationship between the two affections. A girl, about the age of puberty, having been one day particularly annoyed by an intense stutterer, could not forget the circumstance during the night, and on the following day found herself involuntarily imitating him: at the same time, slight twitches and jerking movements of the muscles of the face and limbs ensued, and at the present time, about three weeks from the occurrence, she is suffering a slight but genuine attack of chorea.

Although stammering is thus originally, according to the author, a purely physical defect, dependent on excessive irritability of the motor nervous system, and perhaps at first only slight in degree; yet, as life advances, and as the attention is directed to the infirmity, mental anxiety is superadded to the original physical weakness, and may even continue, and thus become the actual exciting cause of stammering, after the physical weakness has been eradicated: its effect being increased by the force of habit and by association. In confirmed stammering, therefore, we have the original defect of the motor power, combined with the secondary and consequent mental emotion: the proportions in which these two exist varying greatly according to the peculiar idiosyncrasies of the individual. Hence, in the *treatment* of the infirmity it must be borne in mind, that, although the equilibrium of the different faculties requisite for speech was originally disturbed at the "motor point," yet the acquired mental influence has a greater or less share in perpetuating and increasing the disturbance, and must therefore become the subject of curative measures, as much as, or even more, than the original physical defect. For we can more surely and immediately relieve the depressed motor force by removing all excess of mental powers which oppress it, than by trying to eradicate its inherent weakness by measures directed specially to itself. The curative measures recommended by the author merit careful perusal. They resolve themselves into means calculated, first, to improve and invigorate the general tone of mind and body; and secondly, to overcome undue susceptibility, and especially to abstract the mind from all thought of the infirmity

to which the individual has been subject. With respect to the various mechanical and other remedies hitherto proposed, the author values them by the just, though discouraging, standard of their success in practice: though he admits that some may be employed as excellent antidotes to the various bad habits which the stammerer may have acquired, or have been rendered subject to by nervous irritability; such as spasm of the glottis, deficient inspiration, and the like.

In concluding this notice we would observe, that although we may not be inclined to assent to all the physiological reasoning of the author, yet we are confident that he has succeeded in demonstrating more clearly and more satisfactorily than has ever yet been done, the real nature of the disorder which he has investigated, and has thus been enabled to suggest the most rational mode of combating it. We can thus confidently recommend this essay: and although it is strictly a professional production, yet it may with advantage be perused by all who are subject to the infirmity of which it treats.

We have reason to believe that the author, who describes himself as Bacc. Med. Oxon., is the son of a distinguished physician. The essay is highly creditable to him as a member of the profession, and there is no good reason that we can perceive, why he should not have inserted his name in the title-page.

The Philosophy of Animated Nature; or, the Laws and Action of the Nervous System. By G. CALVERT HOLLAND, M.D., Physician Extraordinary to the Sheffield General Infirmary. 8vo. pp. 512. London: Churchill.

WE are at a loss to understand by what course of reasoning the author arrives at the conclusion that the "laws and action of the nervous system" are identical with "the philosophy of animated nature." The latter would embrace the study of an extensive class of organisms in which nervous structure has not hitherto been detected, and which, notwithstanding they are endowed with animation, would be necessarily excluded from the operation of the laws of the nervous system.

The entire work, though occupying many pages, we regret to find conveys nothing original, and much that is far

from established. The author, for instance, takes for granted all the so-called *facts* of phrenology and mesmerism. He reviews the development of the nervous system in the animal series, and deduces thence the secretion of thought from the brain. He dwells on the physiology of the senses, and thence infers that the phenomena are the known results of the existence of "a fluid which pervades the nervous system." He treats at considerable length of the relation between the activity of a function and the integrity of the organ; on the effects of physical conditions in modifying the frames and constitutions of men and animals. But in the whole volume we find little enough that can instruct the well-informed professional reader, while there is much that, under a high sounding title, may mislead the half-informed or non-professional reader, and deceive him with the notion that, after the perusal of this work, he has gained some insight into the "philosophy of animated nature."

Proceedings of Societies.

PATHOLOGICAL SOCIETY OF LONDON.

December 17, 1849.

CÆSAR HAWKINS, Esq. in the Chair.

THE particulars of the following case, which was briefly alluded to in the report of the previous meeting, were received too late for publication, and are now given:—

Mr. Avery related the history of a case of—

Sudden death from rupture of the left ventricle of the heart.

Thomas Hickman, æt. 76, large built, but not fat, was brought to the Charing Cross Hospital, 26th November, 1849. He was quite dead before he arrived, and had been found on the steps of a door in a public thoroughfare, and could not have been long there without having been perceived. It could not be ascertained that he had suffered personal violence or made any sudden effort. There was the mark of a large recently applied blister covering the whole of anterior part of the chest; and it was found that he had been attending at King's College Hospital for some time with an affection of the chest, and had had

repeated attacks before. On removing the sternum the pericardium was found distended with fluid; and on opening it nearly a pint and a half of bloody serum escaped, leaving a very black clot, nearly an inch-thick, covering the whole surface of the heart. At the upper and posterior part of the left ventricle, and under the pericardium, an ecchymosed spot larger than a shilling was seen, and a small lacerated open iris, which gave rise to the effusion. In the interior of the left ventricle, nearly at its lowest part, two or three of the small muscular columns to which the chordæ tendinæ were attached were torn, and nearly close to the septum a rent was perceived, which ran obliquely upwards and backwards to communicate with the opening in the pericardium. The rent appeared recent, as there were no changes about its edges or their vicinity, excepting that the colour of the muscular structure was there, to a slight extent, of a light fawn colour, whilst the rest of the heart was darker than usual. The substance of the viscera was easily lacerated, and there was some ossification of the mitral and aortic valves.

Two instances of a similar rupture are reported in our Transactions of the session before last, both from fatty degeneration; and, curiously enough, in all these three cases the rupture has taken place at the posterior part of the left ventricle, notwithstanding the assertion of a high authority, Rokitsansky, that the lesion is rare at that part, and much more frequent at its anterior ovale.

Mr. MITCHELL HENRY exhibited specimens of rheumatism, endocarditis, and fibrinous deposits in the spleen and kidneys.

The specimens were taken, six hours after death, from a slender but not emaciated young man, who died in the Middlesex Hospital whilst a patient of Dr. Crawford.

The right pleural cavity contained 3ij. of turbid serum, and the surface of the membrane was inflamed. The upper and middle lobes of the lung were healthy, but the inferior lobe contained two patches of lobular pneumonia. One in the interior of the lobe was in an extremely congested state, solid, and sinking in water, of the colour of venous blood, and not elevated above the surrounding surface of the cut lung. The other pneumonic patch, about an inch long each way, was situated at the anterior extremity of the fringe of the lobe, close to the pericardium. It was in the stage of suppuration, pus and lymph freely flowing from a cut made into it; of the colour of ashes, and externally coated with adherent lymph. The margins of both

the inflamed patches were abrupt, and the pulmonary tissues next them not oedematous.

The left pleura and lung showed no traces of recent disease.

The pericardium had been recently but slightly inflamed: about 3ij. of sero-purulent fluid was contained within it. There were some old adhesions of a firm and cribriform character near the roots of the large vessels, and upon these some recent soft lymph, which could easily be scraped off, had been deposited.

The heart was large, and its surface roughened from old pericarditis. All its cavities were stained of a port wine colour. This was singular, as the weather was cold, and the body dead only six hours, so that post-mortem decomposition could not have taken place.

The left auricle, near to the mitral valve, was covered with a very rugged deposit of adherent vegetation, which was continuous with similar but very excessive deposits on the whole mitral valve. This valve was thickened and shrunk, and its surface studded with vegetations, mostly soft, but one of a pendulous character had become cretified. Similar deposits existed in crescentic lines of vegetation upon the aortic valves.

The spleen was twice its natural size, and its surface covered with lymph. Externally it was marked by fibrinous deposits, either within or around purple effusions of blood. When cut into these deposits were found to be recent, buff-coloured, soft, and in some places intermixed with the natural tissue of the organ, in others with purple extravasated blood. They were so large as to make up the extra size of the spleen, and their margins were all abrupt. The tissue of the spleen itself was very soft, yielding when cut a great quantity of thick purple fluid.

The kidneys also contained a few fibrinous deposits in the cortical substance. Here also the deposits were surrounded with purple blood-stained and softened tissue, beyond which there was healthy cortical substance. Though contained in the cortical substance, they were elongated in the direction of the tubes.

In one kidney there was a deep fissure, at the bottom of which the tissues were drawn in towards a small buff-coloured firm remnant of an old fibrinous deposit, which had probably existed at the time of the former pericardial inflammation. Both kidneys were very vascular, and at one spot the tubular rupture was ecchymosed in lines from a very vascular spot in the cortical substance, in which it seemed that fibrine was about to be deposited, or already partly deposited.

These fibrinous deposits seem to be some of the secondary effects of endocarditis, which are only lately beginning to attract attention. Rokitsansky's explanation of their pathology is probably correct. The inflammation of the lining of the heart has given rise to exudative products, which, taken up in the course of the circulation, have been arrested and deposited in the kidneys and spleen in the same way as the secondary abscesses in phlebitis. The inflammation around these deposits in the kidneys and spleen is of a secondary character, and consequent upon the irritation which they cause as foreign bodies.

Hypertrophy of the Sternum, with dilatation of the Aorta, simulating Aneurism.

Dr. QUAIN presented a section of the sternum, with portions of ribs attached, showing the following peculiarities:—The bone is thickened through its entire length, but chiefly at its upper part, where it is one inch, or rather more, in thickness. The texture is cancellated and hard. The first rib at each side is firmly ossified to the sternum. The cartilage of the second ribs at the left side is ossified also, having been previously dislocated forwards. By this dislocation a still further prominence was given to this part during life. There was in this way a well-marked tumor at the upper part of the sternum, about three inches in length by two or three more across, which was found after death to be immediately over the arch of the aorta.

The history obtained by Dr. Quain, who saw the patient shortly before his death, was this. Some forty years ago the patient (at his death being about 65 years of age) received an injury of the chest by a drunken man falling over him. He was, however, able to rise immediately. He was at the same moment seized with hæmoptysis, and has never since been in as good health as before. He has suffered from cough frequently, from difficulty of breathing always. When engaged for any length of time in a stooped posture, he has found it necessary to make signs to have the window or door thrown open, from a feeling of threatened suffocation. He noticed for many years the tumor at the top of his chest, and thought that it sometimes altered in size. He had also of late suffered from pain between his shoulders, and from difficulty in swallowing. He had been able to lie on his back, but not on either side.

When seen his breathing was very difficult; he was in a sitting posture, and unable to lie down. His voice hoarse, with an effort. His expression anxious, his breathing (during inspiration) stridulous; cough not very urgent; expectoration muco-puriform. He complained much of

the pain between his shoulders, and the difficulty of swallowing continued. His pulse was 96, regular, and similar in both arms. On examining his chest the tumor at the upper part of the sternum attracted notice. There was marked dullness over it, and this extended downwards to the heart, and upwards, particularly towards the left clavicle. The chest generally, so far as it could be examined, was more resonant than natural. The heart was not displaced, and its sounds were natural. There was no morbid impulse beneath the swelling, nor was there any murmur, but a roughness of the first sound, not amounting to a murmur, was heard here. The breath sounds were similar in both lungs, viz., sonorous and sibilant rhonchi, with prolonged respiratory murmur. None of the sounds were very loud.

After death.—The chest only was examined. The lungs were found emphysematous, the bronchial mucous membrane much congested. The heart was healthy and in its natural situation. The arch of the aorta was dilated by about one-third beyond its usual dimensions compared with the orifice. This dilatation lay immediately beneath the upper part of the thickened sternum. The lining membrane was rough and leathery, but not calcareous. The recurrent laryngeal nerve was traced passing beneath the arch of the aorta, surrounded by some small gland-like bodies, filled with black matter. The bronchial glands contained much of the same. The specimen possesses some points of interest, for independently of the rare occurrence of this form of hypertrophy of the sternum, analogous to that not very unusual in the bones of the skull, it had apparently produced a series of phenomena very similar to those which characterize aneurism of the aortic arch. There existed, for example, a tumor which had resulted from an injury, dull on percussion, producing hæmoptysis in the usual situation of these aneurismal swellings. There was difficulty of breathing, accompanied by a peculiar stridulous inspiration, difficulty of swallowing, and pain between the shoulders, and the patient could not lie down without distress. On the other hand there was no impulse nor purring tremor felt over the tumor. There was no murmur. The pulse was similar in each wrist, whilst the breath sound was alike in both lungs. There was no displacement of the heart, and lastly he could lie with less difficulty on his back than on either side. The possibility of an aneurism giving rise to the phenomena mentioned was stated, but the weight of evidence being felt to be against the existence of any tumor connected with the blood vessels within the

chest, a doubtful opinion fully justified by the result was given.

Cases of Fatty Degeneration of the Heart.

Dr. QUAIN exhibited also a specimen, under the microscope, taken from the heart which Mr. Avery had shown to the Society at its last meeting. The case was that of an aged man, who was found dead on a door step, where he had evidently been but a few moments. The immediate cause of death was found to be hæmorrhage into the substance of the heart, and hence into the pericardium, which contained a large clot and a quantity of serum. The heart generally was found healthy, except a portion of the back part of the left ventricle which had undergone the peculiar change shown in the specimen. The cross markings had disappeared from many of the fibres. The fibres themselves were filled with oleo-albuminous or fatty granules. The left coronary artery was extensively ossified.

Dr. QUAIN also gave the particulars of another case which had come under his notice since the preceding meeting. A stout corpulent man, aged 53, a gate porter at an hospital, unaccustomed lately to any active exertion, of temperate habits, had suffered occasionally from bronchitis, but in other respects was considered healthy. On inquiry after his death, it was, however, ascertained by Mr. West, physician's assistant at the Hospital for Consumption, who was good enough to ascertain the history of the case, that he had suffered from severe pain in the chest, shooting down the left arm on any excitement; he frequently complained of a peculiar sinking or a sensation of faintness, and an uneasy fluttering at the heart. He was also subject to profuse perspiration. Whilst engaged in some of his usual duties he complained of severe pain across the umbilicus, said he felt himself dying, and immediately expired. He was exceedingly pale, and covered with a clammy, cold perspiration. There was no stertorous breathing.

After death.—The body and the organs generally were found covered with a greater amount of fat than usual. There was nothing peculiar in the brain, neither was there in the lungs nor the abdominal organs, with the exceptions to be presently mentioned. The heart was enlarged. The left ventricle dilated, and its walls soft, flabby, of a dusky brownish red colour, mottled with minute yellow spots, most marked on the columnæ carneæ. These spots presented the characteristic briefly noticed in the preceding case. The left coronary artery was much diseased and obstructed. The aorta extensively ossified. In the fibres of the left kidney, which was the only portion that remained of this organ, there was a large friable calculus. The other ki-

was enlarged, the liver also slightly enlarged.

Mr. HILTON presented specimens of tumors removed from the neighbourhood of the parotid gland.

Also, a drawing of secondary eruption, the result of distinct primary syphilitic disease, in a girl only seven years of age.

Mr. FERGUSSON exhibited a specimen of a large tumor, weighing 18 oz., removed from the side of the face and neck, and situated just over the parotid gland; it had been thirty years growing in this situation, and had lately become suddenly and greatly inflamed. Softening had been produced throughout a considerable portion of the mass, which presented a malignant aspect.

WESTMINSTER MEDICAL SOCIETY.

Saturday, December 15, 1846.

MR. HIRD, PRESIDENT.

Insanity from the Use of Chloroform during Parturition.

Dr. WEBSTER related the following case, communicated to him by a professional friend, in consequence of perusing in the *Lancet* a report of the three similar instances he had mentioned at a previous meeting of the Society. Only one drachm of chloroform, sprinkled upon a handkerchief, was used; but the effect it produced was so sudden and violent, that the patient, after inhaling, remained quite insensible, which greatly alarmed the attendants. With the insensibility there was likewise deadly paleness of the countenance; however, she slowly rallied, but had a painful and protracted labour. During several days subsequently, the lady continued in a very nervous condition, although not then actually incoherent, but she soon became so furiously maniacal as to require coercion by a strait-waitcoat. After being insane during many months, the patient gradually recovered her reason, and ultimately got convalescent. Considering it was only from accumulated facts and extensive experience that sound practical knowledge respecting the employment of chloroform in midwifery could be acquired, Dr. Webster then said he had related the present, as likewise the previous examples of insanity following its use, in order to contribute data towards that important object; and he suggested that if the present opportunity should esteem gentlemen would all marked cases peculiar, which they grace-

tice, as he (Dr. Webster) was very desirous of collecting additional evidence upon this interesting subject; of course, on the express understanding that neither the patient's name should be divulged, nor the correspondent in any way compromised, all such communications being considered strictly confidential in regard to individuals.

Uterine Scarificators.

Dr. ROUTH exhibited to the Society three uterine scarificators, made by Mr. Coxeter, of Grafton Street. Two of these, he remarked, were of little practical utility. Of the third he believed he was the inventor, though it was founded on the principle of other instruments used abroad. It was to this instrument he wished, therefore, to call the attention of the Society. It consisted of an external metallic case or tube, one end of which was dilated, to receive four lancets, concentrically arranged. The lancets were fastened upon a steel rod, which passed through the tube to the opposite side, connected within the case with a spiral spring, the effect of which was to keep the lancets, when in a state of rest, within the dilated part of the tube. The end of the steel rod projecting on the opposite side was terminated by a circular disc, between which and the tube was another little steel disc, playing on a screw, by which the projection of the lancets might be graduated. The difficulty was in keeping the lancets clean. This, however, was greatly facilitated by a peculiar arrangement in the central rod, which was so made as to unscrew in two parts, about two-thirds down the tube; and in this manner the upper portion could be drawn out and cleaned; while in like manner the tube, by the passing of a piece of lint within it, could be wiped. The quantity of blood, however, that penetrated down the tube was very trifling. In the application of the instrument, a speculum was first used, to bring the os and cervix in view; and the instrument, being passed up through the speculum, was thus brought in contact with the uterus. The slightest pressure now upwards of the disc caused the lancets to penetrate into the substance of the cervix; while the spring, on the removal of this pressure, caused the lancets to return into the dilated tube; and in this manner, by the alternate movement, the cervix uteri could be punctured *ad libitum*, and to any depth. Now, congestion of the os, with all its disagreeable consequences, and prolonged cervix, causing vaginal irritation, metritis, &c., were very common affections. In these cases, he (Dr. Routh) was in the habit of first puncturing freely the cervix; but in prolonged cervix, where more hæmorrhage and absorption of substance was required, in addition to the puncturing of

the cervix, by turning the disc from left to right, he was enabled to cut it up in little portions. Then, by applying a solution of nitrate of silver (from twenty grains to one drachm to the ounce), much hæmorrhage and great absorptive action was set up in the part, and the disease removed effectually. The use of leeches in the ordinary way, or caustic, were both tedious processes, and usually the former was especially disagreeable to a patient. With this instrument the cure was very speedy and effective. A prolonged cervix of from two to three inches could be cured in two weeks by two or three scarifications. Under these circumstances, he ventured to hope the instrument would be found useful, in the hands of the profession, for the treatment of uterine diseases. One caution, however, he thought proper to add—it was always well to follow the scarification by a brisk purgative.

Contagion of Cholera.

Mr. W. F. BARLOW read the following cases, which had been communicated to him by his friend Mr. Cocks, jun., of Hatfield, near Harlow, Essex. In addition to the evidence in support of the contagious nature of Asiatic cholera, the following cases may be fairly quoted:—**CASE I.**—Susannah P—, aged six years, left West Ham, accompanied by its mother, 7th of October, 1849, during the prevalence of cholera in that district, for White Roothing, a scattered rural village, thirty miles from London. The child appeared quite well and lively. In about four hours after its arrival it was seized with cholera, and died in about nineteen hours, in collapse. **CASE II.**—The grandmother of the above, living in the same cottage, who attended upon the child, was seized on the 11th of October with Asiatic cholera, and died in forty-eight hours. **CASE III.**—The grandfather of the child, also living in the same house, was seized on the 21st, at 12 P.M., with Asiatic cholera, and died in a comatose state, in seventy-two hours; he had nursed his wife during her illness. The mother and father of the child, who were in constant attendance on the above cases, escaped: no other persons would enter the house. The house is isolated, two others being near, but not attached to it, and stands near a wood, upon elevated ground. No other cases have occurred within seven or eight miles of the spot. It appears most evident that the child caught the disease before leaving West Ham, and communicated it to its relatives. I think a stronger instance of contagion could not well exist. Diarrhoea was common throughout the immediate neighbourhood, but there was no Asiatic cholera.

ACADEMY OF MEDICINE, PARIS.

December 11th and 18th.

M. VELPEAU, PRESIDENT.

M. GIBERT (the Secretary) presented an analysis of the labours of the Commissions on Prizes:—

1. That of the commission on the *Ci-ri-eur* prize: composed of MM. Fouquier, Collineau, Jolly, Baillarger, and Bouvier (reporter). The subject brought before this commission for the year 1849, was that of *Chorea*, on which four essays had been submitted.

To one of these, by Dr. Roth, of Paris, a medal, of the value of 300 francs, has been awarded; to another, by Dr. Sée, of Paris, a prize of 1,000 francs was awarded. The chief point in the latter essay is the influence of hereditary predisposition in the production of the *neuroses* in general, and of *chorea* in particular. The author also fixes the mean duration of the disease at from two months to two months and a half. The several conclusions of the author are supported by two hundred and thirty-eight observations. The former essay consists of a collection of facts from other writers, and attributes a greater share to time, regimen, &c., than to medicinal remedies in the treatment of *chorea*.

This commission proposed as the subject of the prize for 1850—"Convulsions."

2. The commission on the question, "Is typhoid fever contagious?" composed of MM. Louis, Chomel, Bricheteau, Melier, and Gaultier de Claubry, (Reporter).

Seventeen essays had been submitted, of which four only denied, while thirteen asserted, the contagiousness of this class of fevers.

The prize of fifteen hundred francs was awarded to the essay by Dr. Pied-de-Vache, of Dinan, as being the most complete. This essay was in favour of the contagiousness of typhoid fever.

A second prize of five hundred francs was adjudged to Dr. Letalenet, of Paris. At the same time honourable mention was made of the essays by Drs. Muller, of Haut-Rhin, and Larroque, of Paris.

The Commission proposed the subject of white swellings, for the prize of 1851.

3. Commission on the *Portal* prize; composed of MM. Cruveilhier, Cornac, Nacquart, Husson, and Rochoux, (Reporter).

Only one essay, on *Cirrrosis*, was presented. This essay gives a complete history of *cirrrosis*, which it attributes to hypertrophy of the cellular tissue passing from the capsule of Glisson. A prize of four hundred francs was adjudged to the author, Dr. F. Dufresne, of Paris.

The subject selected by this commission for the next prize is, "The normal anatomy of the liver, and of the pathological condition known as the fatty liver."

4. Commission of the Itard Prize (triennial), composed of MM. Louis, Fouquier, Gaultier de Claubry, Martin Solon, and J. Guérin, (Reporter).

The object of the prize is, any work, French or foreign, coming within certain specified limits. The commission awarded a prize of two thousand francs to the work of MM. Rilliet and Barthéz, on the diseases of infants; and a second of one thousand francs to that of M. Larroque, on typhoid fever.

The commission of the Argenteuil prize, as well as the cholera commission, had not completed their reports.

At the meeting of the Academy on the 18th December various letters were read. Communications on the following subjects were received, and referred to commissions, viz.:—

On the influence of vesication in rheumatic inflammation of serous membranes, by M. Goutceit.

On treatment of hydrocele by injection of ammonia, by M. Bonnafont.

On the contagion of cholera, by M. Morlot.

On saline mineral waters, by M. Germain.

The election of officers for the year 1850 then took place as follows:—M. Bricheteau, President; M. Orfila, Vice-president; M. Gibert, Annual Secretary; MM. Velpeau, Rayer, and Guibourt, members of the Council.

X

CASE OF A BITE OF A MAN FOLLOWED BY FATAL CONSEQUENCES.

DR. DUHR, of Coblenz, relates the case of a police-officer who, in arresting a prisoner, received a severe bite on the thumb of the right hand. The wound healed favourably. On the eighth day after the receipt of the injury he felt numbness and stiffness of the thumb and fore-finger, extending up the arm, with spasmodic twitching of the muscles. On the following day, convulsions so violent occurred that the strength of several men was required to hold him in bed. Temporary unconsciousness also followed. The symptoms subsided gradually for two months, after which time, however, they returned with aggravated suffering, and accompanied with impediment in speaking, sleeplessness, frequent unconsciousness, ending in coma and death: inflammatory softening of the posterior portion of the left hemisphere of the brain was found after death, with sanguineous congestion and diminished consistence of the cerebellum, pons varoli, medulla oblongata, and part of the cord.—*Cas.*

X

Hospital and Infirmary Reports.

LONDON HOSPITAL

OPERATIONS FOR STONE.

CASE I.—*Large calculus impacted in the urethra, causing symptoms of retention of urine—Extraction by operation.*

John Hanwell, *æt.* 50, a healthy-looking labourer, was admitted into the London Hospital on Sunday afternoon, July 29th, 1849, suffering from retention of urine of an urgent nature. He had experienced difficulty in making water for some weeks, but it had much increased the last fortnight, and during the two or three preceding days blood had passed with the urine. The bladder did not feel distended, but the patient experienced the most urgent desire to pass water, was constantly straining to do so, and was in great distress. The dresser, on attempting to introduce a catheter, found that the instrument came in contact with a stone in the urethra, and, as he was unable to reach the bladder, Mr. Curling was sent for. On passing a catheter, he detected a stone lodged in the perineum: a stone could, indeed, be felt through the integuments at this part, and, on introducing the finger into the rectum, one of considerable size could be felt anterior to the prostate. On inquiry, it appeared that the man had been cut for stone by the late Mr. Scott four years previously, and the cicatrix of the lateral operation was very perceptible. As the patient was in considerable suffering, it was necessary to relieve him at once by extraction of the stone. He was carried into the operating theatre, and tied up in the usual manner for lithotomy. A small catheter was passed down the contracted urethra, and held by an assistant in contact with the stone, the point of the instrument being in the perineum. Mr. Curling cut down upon this through tissues a good deal condensed by the previous operation. On laying open the urethra, he came upon one extremity of the stone, which was found so firmly lodged that it could not be moved: he was therefore obliged to extend the incision downwards, so as more fully to expose the calculus, which required some little dissection. The point of a director was passed behind it, and then, by using some force, the stone was dislodged so as to admit of being seized with a pair of forceps and extracted. On introducing a catheter into the bladder, not more than four ounces of urine was drawn off. An opiate was given, and the patient soon became greatly relieved, and passed a quiet night. The wound after-

wards healed favourably, and the urine was voided by the natural passage. An instrument was passed occasionally, to prevent contraction of the urethra, and the patient was discharged cured by September 4th.



The calculus was of an oblong form, and two inches and a quarter in length, and seven-eighths of an inch in breadth at its widest part. There was a contraction near the centre which gave an appearance as if a single stone had been formed by the union of two. A section, however, did not confirm this supposition. Towards the large extremity there was a distinct nucleus of lithate of ammonia, amounting to about a sixth part of the concretion. The rest consisted of the triple phosphate. The nucleus was no doubt a stone which had escaped from the bladder, and, whilst lodged in a dilated part of the urethra, had gradually increased by the addition of triple phosphate, until it so interfered with the functions of these parts as to cause the urgent symptoms for which the patient was admitted. So large a stone has very rarely been formed in the urethra; and it is surprising, considering its size, that serious symptoms were not produced earlier.

CASE II.—*Lithotomy—lateral operation—Recovery.*

John Arthur, *æt.* 3 years, was admitted, into the London Hospital, under the care of Mr. Curling, Oct. 1849, suffering from urgent symptoms of stone. Difficulty and pain in micturition had been experienced so far back as the preceding April twelvemonth. Mr. Curling operated on him for phymosis about eight months back, and at that time he detected a stone, and recommended the mother to allow lithotomy to be performed. Her fears prevented her taking the advice; but the child's suffer-

ings having subsequently much increased, she gave her consent to an operation, and brought the child to the hospital. A stone of some size was ascertained to exist by sounding, and, on examination by the rectum, there seemed to be two of considerable magnitude in the bladder. The urine was alkaline, and free from albumen.

Oct. 11th.—The child having been put under the influence of chloroform and ether, Mr. Curling performed the lateral operation with the gorget, and readily seized a stone in its long axis, so that it was removed with ease from the bladder. There was no bleeding. No unfavourable symptoms occurred after the operation. The wound closed, and the boy was discharged cured, Nov. 1st.



The stone was of an irregular shape; the nucleus in the upper part was composed of lithate of ammonia. The rest of the stone consisted of the triple phosphate. Before being cut it looked like two calculi united, but this evidently was not the case.

The chief point of interest in this case is the curious shape assumed by the calculus, for which it is somewhat difficult to account. The stone being of large size, and having existed for a long period, not less than eighteen months, so rapid and favourable a recovery could scarcely have been anticipated.

CASE III.—Stone in the bladder—Lithotripsy followed by cystitis—lithotomy six weeks afterwards—Recovery.

David Gibbon, æt. 50, a carman and porter, was admitted into the London Hospital, under Mr. Curling's care, in October 1849, suffering from symptoms of stone in the bladder. He had experienced some difficulty in making water for nine years, but had become much worse during the past year, and for the last six months the water was observed to be bloody after exercise. On sounding, a good-sized stone was detected. The urine was alkaline, and

clouded slightly with mucus. As the man was in tolerable health, had a capacious urethra and healthy prostate, and not much irritability of bladder, Mr. Curling considered the case proper for lithotripsy.

Oct. 11th.—He injected about eight ounces of water into the bladder, and, on introducing the lithotrite, readily seized a stone, which soon slipped from the blades in crushing with the screw. The stone was seized a second time, and, after giving way a little, again slipped. Several small fragments of a phosphatic calculus, no doubt the outer shell of the stone, came away between the blades of the instrument, and others passed with the urine during the first two or three days. The operation was followed by considerable inflammation of the bladder, a profuse discharge of ropy matter, and febrile symptoms. These were subdued by rest and treatment, but the patient did not regain his appetite, and, having suffered so much from lithotripsy, expressed a wish to be cut. On again sounding, a good-sized stone was distinctly felt. He complained of occasional pains in the left loin, and did not sleep well at night. The urine was slightly alkaline, but not albuminous.

Nov. 22d.—Chloroform and ether having been administered, Mr. Curling performed lithotomy, using the gorget, and extracted a moderate-sized stone. There was free bleeding from the transverse perineal artery and the large prostatic veins; the former was tied, and the bleeding from the veins checked by plugging the wound with sponge, a large elastic catheter being first introduced into the bladder. About eight ounces were lost. The sponge and catheter were removed an hour after the operation, when all bleeding had ceased.

The patient recovered slowly from the operation. His progress was delayed by slight inflammation of the inguinal glands, which occurred about a fortnight afterwards, and required leeching.

Dec. 21st.—The wound was gradually closing, and the patient regaining his strength. He was taking quinine, eight ounces of wine, and a pint of porter.

The calculus was of a flattened oval shape, and one inch and five-eighths in length: it was composed of lithic acid deposited upon a nucleus of oxalate of lime, and coated with the mixed phosphates and lithate of ammonia in alternate layers, the larger and outer layer being almost entirely phosphatic. Some sharp phosphatic crystals, no doubt recent, coated part of its flattened external surface.

Medical Trials and Inquests.

REPORT OF A CASE OF ALLEGED RAPE AND MURDER, WITH MEDICO-LEGAL REMARKS ON THE CAUSE OF DEATH. BY F. OGDON, M.D., ABERDEEN.

At the autumn circuit Court of Justiciary, held in Aberdeen last month, a case was tried which involved the double charge of rape and murder, and which, after a lengthened investigation, ended in the conviction of the person indicted, and his consequent execution for these crimes on the 16th October.

As this trial presented some features of a kind which seem likely to prove interesting to those members of the profession who devote a share of their attention to medico-legal proceedings, with the concurrence and co-operation of the gentlemen principally engaged with me on the side of the crown I have drawn out the subjoined outline of the whole for publication in the *MEDICAL GAZETTE*. In doing so it will be observed that I have, in a great measure, kept separate the facts brought under the notice of my colleague and myself at the precognition* from those elicited from the other witnesses at the trial, and for the obvious reasons, 1st, that it was in this order that the circumstances of the case became known to me; and 2dly, that by following this arrangement, the source will be indicated from which alone our judgment had to be formed, both at the precognition and on the trial.

My first acquaintanceship with this difficult and important case began on the morning of the 11th of April last, when Dr. James Jamieson, of Aberdeen, Mr. Samuel Davidson, surgeon, Rayne, and myself, accompanied Mr. Simpson, Procurator-Fiscal for the county, to the inn at Badenscoth, parish of Auchterless. There we were first requested to examine the person of James Robb, quarrier, a stout young man of 22 years of age, who was in custody on suspicion of having violated and afterwards taken away the life of Mary Smith, aged 68, an unmarried female pauper living by herself in a small house at Redhill, in the neighbourhood. On a pair of corduroy breeches then on his person we observed

some patches of dark brownish matter,* situated near the outer seam at the middle of the left thigh. On the left side of his face were several linear abrasions of the skin, varying in length from two lines to three-eighths of an inch—viz. a vertical scratch or abrasion on the cheek, a horizontal scratch on the lower eyelid, a scratch across the side of his nose, and three scratches in the angle between the nose and the cheek. There was a reddish stain,† three-eighths of an inch in greatest breadth, on the outside of the left breast of his shirt. In addition, we noticed an irregularly oval reddish spot, partly abraded, and varying in breadth from three-quarters to a quarter of an inch, on the skin on the outside of his right elbow; and at the right side of his prepuce or foreskin, an irregular reddish, partly abraded, spot of very minute size.

Our next step was to attend Mr. Simpson to the cottage at Redhill, a small cabin containing only one apartment. In this room, and on a wood-bound bed at one end of it lay the body of a woman, which was identified as that of Mary Smith, and which the witnesses stated to be in the situation in which it had been found by them on the previous day.

Smith's corpse lay obliquely across the bed in an extended position; the hair of her head loose and dishevelled; the head a little bent downwards on the chest, and inclined to its left side; the lower limbs ten inches and a half apart; the right leg bent; the right arm extended from the side, the left arm bent at the elbow, and the left hand in contact with her left side. We found the bedding much disordered: the blankets at the left side of, and not on, the body; the borders of a cap worn by her turned back, its left flap bloody; a shawl or neckerchief about her neck and shoulders loose and disarranged; the front of

* This brownish matter, which was found in part still adherent to Robb's breeches when shown to us on our return to Aberdeen, was so minute in quantity that it only enabled us to determine by comparative trial that, like ordinary peat-soot, it contained carbon, a volatile salt visible under the microscope, and one or more alkaline carbonates effervescing with the mineral acids.

† This stain was afterwards submitted to the usual chemical tests. Albumen was found in it in sparing quantity; a little colouring matter also subsided from the stained portion of the shirt when separated and suspended in a glass tube with distilled water; but as its colour was but faintly to be distinguished as red, it occurred to us that it might be well to place a little of this deposit from the bottom of the tube in the field of a good microscope. The result proved very satisfactory, as not only did we thus detect fragments of the fine tubes usually met with in the same circumstances in a drop of fresh-drawn blood, but also a few blood-corpuscles, some of both distinctly reddened.

* The precognition, or preliminary investigation, in Scotland, which takes the place of the coroner's inquest in England, in so far as it concerns the medical witnesses, embraces,—1st, a written report of the facts observed and the opinions drawn from these; 2ndly, the written answers to questions put by the public prosecutor for the further elucidation of such facts and opinions. The report is labelled on, and made a production at the trial. The written answers generally embrace the points drawn out from the witnesses subsequently at the trial.

her shift doubled up from below; her privy parts and the lower parts of her belly exposed, and the single sheet on the bed lying at her feet crumpled and dirty, as were the bed-clothes generally. We observed a bloody fluid at one of the corners of her mouth; and blood, partly clotted and dry and partly fluid, covering the privy parts of her person (the vulva), and staining the bedding immediately underneath, as well as a pair of drawers chiefly of woven wool worn by her, in the same situation. In addition to the blood at her privy parts, and the bed and drawers near them, there was a quantity of excrement (fæces) on the same parts.

On proceeding to inspect the body, we met with the following appearances—viz. the joints rigid; the mouth open; the pupils dilated; the countenance natural; the tongue protruded from between the front teeth; the back parts of the corpse and the finger-nails livid; an oval clot of blood under the integuments at the prominence on the left side of the forehead, not exceeding half an inch in greatest breadth; the sinuses and veins within the head unusually loaded with dark fluid blood, the inner membrane of the brain (*pia mater*) showing a fine network of injected blood-vessels; the interior of the brain closely studded with bloody points, and its grey matter of a pinkish hue; a large quantity of dark fluid blood in the veins of the neck and upper part of the spine; the mouth, throat, air-passages, and soft parts of the neck, healthy; five and a half fluid-ounces of reddish liquid in the chest; the lungs partly emphysematous, and in part a good deal congested with dark fluid blood, with frothy fluid in their air-cells; the right cavities of the heart distended with dark fluid blood; its left cavities almost empty; the walls of the heart on its right side very thin, and at the ventricular part of its left side very much thickened; the liver, spleen, and kidneys, much congested with dark fluid blood; alimentary matters in the stomach; two fluid-ounces of reddish liquid in the cavity of the belly; the womb and ovaries pale and shrunken; the entrance of the vagina (or canal leading from without to the womb) bloody; the fourchette (or fold of integuments forming the posterior boundary of the genital fissure) excoriated on its inner surface; the bodies termed *carunculæ myrtiliformes* (or the small fleshy bodies placed around the entrance to the vagina) were dark-coloured, and those on the left side had two minute clots of blood in their interior.* The exterior of the

body generally,* the parts about and within the fundament, the upper part of the spine, and the organs within the cavities of the body, were all healthy. The corpse was plump and well-formed, and free from putridity.

Such were the data afforded us, in order that we might decide from an inspection as to the mode of this poor woman's death; and to this very important duty we now proceeded, keeping strictly within the limits† prescribed to us by the terms of our remit. It appeared to us that on the main point, or the mode of death, a guarded and qualified opinion alone could be safely arrived at by us. The body itself, it was evident, presented on dissection no such very decided marks of disease or of serious violence as to authorise a positive conclusion in favour of death, either wholly from natural causes or by means of violence alone; nor were the appearances of disease or injury met with on the inspection of such a kind as to admit of our very satisfactorily determining by means of these the immediate cause of Smith's death. Apart from the marks of local violence, the state of the cavities of the head, chest, and belly, and other obvious appearances, while they did not authorise us to exclude the possibility of death by coma or indirect asphyxia,‡ led us to decide that, though certainty was unattainable, the probability was that death had in this case been occasioned by primary or direct arrest of the respiration, or in other words, by ordinary asphyxia.

As to the second point we had to determine—viz. the violation of the woman's

still moist, by the method recommended by Bayard (*Ann. d'Hygiène*). The microscope, however, failed in showing any of the spermatic episoa in the prepared liquid.

* A little redness on the inside of the right thigh proved to be a mere stain with blood.

† As some surprise has been expressed at our not having given further effect than we did to the moral presumptions and the circumstantial evidence afforded by the state of the bed and bedding in this instance, I may observe that the remit, or legal warrant, merely directed us "to inspect the body, and to report the appearances on it, and the cause of death," as founded on such inspection. Besides, in such circumstances, as has been remarked by Dr. Taylor, the duty of the medical jurist "is rigorously confined to the furnishing of medical evidence from medical data alone," unless specially required to make use of other evidence. (*Manual of Med. Jurisp.* 719). This restriction was not removed even at the trial.

It will be seen a little onwards that the strict physiological meaning of the term asphyxia, as inclusive of both direct and indirect stoppage of the breathing, was fully brought out at the trial, a point which, though now well understood in medicine, is probably new to courts of law. The term itself, though a technical one, was purposely in accordance to its English synonym, and the latter would at once convey a very different idea to them.

* A portion of mucus, slightly bloody, found at the upper part of the vagina, was removed and secured in a sealed vessel. On our return to Aberdeen we lost no time in examining it, and

person—we had no hesitation in saying, from the data before us, that the clot of blood under the integuments of the forehead, and the effused blood, the abrasion, and the slight bruises observed about the privy parts of the body, while they were not in themselves sufficiently severe to account for her death, and might have been produced at, as well as shortly before, death, though most likely caused at the latter of these periods, were, especially when taken in conjunction with the position in which the woman was found by us, indicative of violence having been done to her person about the time of the extinction of her life.

The Report itself I need not subjoin, as it merely embodied in the words of the above narrative the facts and observations above stated, with the conclusions just noticed appended to it, the whole being thrown into the form of a certificate.

In reference to Robb, our Report, after enumerating the scratches on his face, elbow, and penis, the blood on the breast of his shirt, and the brownish matter resembling soot on his breeches, merely bore further that the abrasions of the integuments on the different parts of his body appeared to us to have been caused recently before our examination of them, and to have been the effects of external injury.

In addition to the Report to which I have been alluding, two others were given in to the authorities by medical gentlemen in the country who had seen Mary Smith on the day preceding our visit and inspection. These, however, which only became known to us after the trial, on which they were also produced and read, will fall better to be noticed afterwards.

On the 19th ult. James Robb was brought to the bar of the Circuit Court of Justiciary, charged with the offences of rape and murder, in having, on the 9th or 10th of April last, wickedly and feloniously entered the house of Mary Smith, now deceased, during the night, and attacked and assaulted her, and struggling with her and striking her with his fists, or some other instrument on the head and other parts of the body, and, by covering her mouth and nostrils, did suffocate and mortally injure her, so that she died immediately, and was thereby murdered. The indictment likewise set forth the circumstances of the charge of rape with those of the minor accusation of assault and intent to ravish included in the major proposition.

In accordance with the usual practice, the public were excluded, and the proceedings were conducted with shut doors.

The prisoner pled guilty of rape, in the expectation, had his plea been received, of having his sentence restricted to an arbi-

trary punishment, as is usually done in cases of this nature where no aggravation is charged, though, by the law of Scotland, rape is still held to be a capital crime. The plea, however, was not accepted, and the case went to proof.

From the evidence led, which was entirely circumstantial, it appeared that Robb had been at the fair or market at Badenscoth on the 9th of April, where he had indulged in liquor to some extent, and been quarrelling and fighting: he had there lost his staff, but had obtained another in its place, some peculiarities about which rendered it easily identified. About 10 P.M. he had left the market and proceeded homewards to Fisherford, where his father resides. On his way home he had to pass the house occupied by the deceased Mary Smith. On parting with his companions at the inn shortly before, he had no scratches on his face. His last conversation with them was to the effect that he was determined that night to gratify his sexual passions, which he intimated to them in coarse terms. Smith's door was found open on the morning of the 10th: she had been seen on the evening before in her ordinary health. Matters about her bed and body were in the state already described, except that, in addition, froth was observed about the mouth. Marks of corduroy were noticed on the back and sides of the wooden "lum" or chimney of the house. Robb's stick was found outside the door. The wood at the back of the bed was driven out of joint. The head of a button, the neck of which was afterwards found attached to the breast of Robb's coat, was discovered in one of the folds of the sheet on Smith's bed. On returning to his work on the 10th, Robb's companions noticed the loss of the button on his coat, the scratches on his face, and black stuff below the collar of his coat, which one of them rubbed off, observing that he had surely been in "somebody's lum." On his apprehension the prisoner admitted, in his declaration before a magistrate, that he had gone down Smith's chimney on the night in question to obtain a light to his pipe, after vainly knocking at the door for admittance.

[To be continued.]

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practice, on Thursday, 27th December, 1849:—George Clarke, Bath—Edward Gollidge Pitt, London—Charles William Whitby—William Vaughan Jones, Festiniog, North Wales.

Correspondence.

DR. PARKES'S REPORT ON THE EARLY CASES OF CHOLERA IN LONDON.

SIR,—In reference to the discussion on the early cases of cholera in London, might I beg the insertion of the following letter addressed to the General Board of Health, in which some corrections are made respecting the cases in Horsleydown, to which reference was made in the MEDICAL GAZETTE two or three months since. I have requested leave, from the General Board, to publish the letter in your journal.

Your most obedient servant,

E. A. PARKES.

3, Upper Seymour Street,
Portman Square, Dec. 20, 1849.

SIR,—In the "Report on the earliest Cases of Cholera occurring in London," which I presented to the Board of Health in February last, an error occurs in respect of the date of the first case. It should be September 22d instead of September 28th. The error arose from the use of the names of the days, instead of the actual dates, in the letter which Mr. Russell of Horsleydown, the reporter of the cases, sent to the General Board. A communication which I have received from Mr. Russell enables me now to give the following particulars regarding this case, and another doubtful case which occurred eight days later in the same house.

The Elbe steamer arrived in London on the 18th or 19th of September, 1848, instead of on the 25th, as stated in my Report. John Harnold, or Harrold, the subject of the first case of cholera in London, went to sleep at a small receiving-house for sailors, at No. 8, New Lane, Gainsford Street, Horsleydown. In the same room, but in another bed, slept two workmen, Blenkinsop and Lawrence. On the morning of the 22d of September, at 5 A.M., Harnold got out of bed, and passed a motion into the utensil in the room. He then dressed himself, took the vessel down stairs, and emptied it into the necessary. He remained down stairs, and after some some short interval suffered from increasing purging, and finally from developed cholera. He died at half past four in the afternoon. In the meantime Blenkinsop and Lawrence got up and dressed themselves. At 6 A.M. Blenkinsop left the house, and went to his work. He did not return till after the death of Harnold. He did not see Harnold after his death; he did not wash the clothes; nor did he or any one else sleep in the room for three weeks after Harnold's death. Harnold was nursed by three women, who also washed the body, and some of the clothes. The rest of the clothes

were burnt. The body was buried on the Saturday morning.

Blenkinsop was taken ill on the 30th of September, eight days after Harnold's death. Mr. Russell is decidedly of opinion that it was a case of Asiatic cholera; and there is no question that its severity was much underrated in my Report. There was "vomiting, purging, violent cramps, collapse of the countenance, sunken eyes, loss of the voice, coldness of the breath and tongue, and suppression of urine for seventy hours." (Extract from Mr. Russell's letter to me.) The patient then slowly recovered.

Mr. Bowie, who saw the patient on the Wednesday after his attack, considered it to be a case of English cholera. He still adheres to that opinion, as given in the following extract of a letter addressed to me on the 22d of September last:—

"Mr. Russell must neither be surprised nor offended at my retaining the opinion I expressed to him, and from which he did not dissent, that the case of the lodger was not a decided one. I believe it to have been excited by very improper diet, excess, and the alarm he had sustained."

No other person in the house suffered except Blenkinsop. The next case in Horsleydown was in the person of the old man (Case XII. in my Report). This patient lived about seven hundred yards from the house in which Harnold died. He had formerly worked at a place behind Mr. Russell's house, perhaps seventy or a hundred yards away from New Lane, and by which a sewer passing from New Lane runs. But being superannuated he had not worked here for eighteen months. He had, however, paid a visit to a friend here shortly before his death. The exact date cannot be ascertained, nor could I learn how long he remained in his old workshop.

These three cases, if Blenkinsop's is to be considered one of cholera, were the only cases at that time in Horsleydown, Mr. Russell has made inquiries for me on this point, and is satisfied that there were no more cases till November.

The Board will, I think, perceive that the conclusions arrived at in my Report are not in the least invalidated by these corrections. It is still as impossible to trace any proximity or intercourse between the early cases. And it is very satisfactory that a more minute inquiry in Horsleydown has discovered no fresh cases in that locality into which there appeared to be an importation of the disease. I was informed, indeed, that another seaman of the Elbe had died; and the necessity of inquiring into this has been the cause of the delay in the transmission of this letter to the General Board. I have done so, however, that the seaman of the Elbe referred to

died in November, after the steamer had left London, gone to Hamburg, and returned again.

Permit me to observe, that if Blenkinsop's case is to be considered one of cholera, as, indeed, appears to me probable, it may still be questioned whether he derived the disease from Harnold. He did not, certainly, derive it from Harnold according to the usual rule of contagion. He did not nurse Harnold; he did not even see Harnold, after this man became the subject of cholera, except for a few minutes before Harnold left the room in the morning. If Blenkinsop derived the disease in any way from Harnold it must have been from the particles of poison adherent to the clothes, and given off in the room during the two or three nights the men slept in the same apartment; or it must be attributed to particles of poison still lingering about the place after Harnold's burial. These suppositions seem to me rather improbable, especially as the incubative period would be unusually long were the first hypothesis correct. I do not, of course, allude here to another opinion which has been proposed by Dr. Snow since my Report was written, viz. that water is the medium of communication. The object I had in view in framing the Report was to test the current opinions regarding contagion as applied to cholera.

If the General Board will now review the early cases of cholera in London, the date of Harnold's death being altered, and Blenkinsop's case inserted, it will be found just as impossible to trace intercourse and proximity between these early cases as it was previous to the corrections. In some respects the argument is even strengthened.

I have the honour to be, sir,

Your most obedient servant,

E. A. PARKES, M.D.

To Henry Austin, Esq.

Secretary to the General Board of Health.

3, Upper Seymour Street, Portman Square,
November 24, 1849.

POISONED GAME.

A FEW days ago, a Lincoln gentleman who was out shooting, picked up a dead partridge, which, having no mark of injury upon it, excited his attention. On arriving home he opened the bird, and submitted the wheat, &c. in the stomach to analysis. The quantity of arsenic discovered was pretty nearly sufficient to have poisoned an entire family; and had this bird been found by poachers, or netted by them when unable to fly, it would, in all probability, have been sold to the dealers, and thus a very serious affair might have resulted from the steeping of seed in arsenic.—*Pharmaceutical Journal*, January 1850.

Medical Intelligence.

THE PROPOSED NEW CHARTER OF THE ROYAL COLLEGE OF SURGEONS.

To the Right Hon. Sir George Grey, Bart.,
one of Her Majesty's principal Secretaries
of State.

As chairman of a committee of members of the medical profession residing in Manchester and its neighbourhood, appointed at a public meeting to watch the progress of the medical reform question, I am directed respectfully to represent to you that a statement has appeared in the public journals to the effect that the Council of the Royal College of Surgeons of England are about to petition the crown for the grant of a charter that shall amend and ratify the anomalies and deficiencies of that conceded in 1843.

The Manchester Committee having maturely considered this reported proceeding of the Council of the College in its bearings upon medical legislation, would respectfully impress upon you the justice and expediency of withholding all recommendation to Her Majesty in conformity with such petition, until the Fellows and members at large have had the proposed charter submitted to them for examination and discussion.

The Committee beg further to represent to you that the charter of 1843 was granted without any such previous notification; that when published after its concession, a condemnation of its provisions, all but unanimous, came from the profession at large; and that this circumstance has constituted the great obstacle to all recent attempts at medical legislation.

Finally, the Committee would express their conviction that the grant of a charter which should bring the institution into harmony with its members who constitute the great majority of English practitioners, would remove all serious impediment to a satisfactory settlement of the question of medical reform.—Signed on behalf of the Committee,

W. WATSON BEEVER, Chairman.

Manchester, Dec. 1849.

ON THE TOXICOLOGICAL USES OF CHARCOAL.

M. ESPRIT, jun., of Rouen, gives the following conclusions from his researches into the power of absorption of various substances by charcoal:—

1. That charcoal is incompatible with the substances which it absorbs, and thereby renders them insoluble.

2. That the employment of charcoal in chemico-legal investigations is the source

of serious errors, inasmuch as it is capable of separating the metallic salts from the solutions for the decolorization of which it is employed.

3. That in some cases charcoal may be advantageously employed in chemicolegal researches—*e. g.* fluids suspected to contain corrosive sublimate or vegetable alkalis, may be treated with charcoal, from which these substances may afterwards be separated by alcohol or ether.

4. From the property of absorption of certain metallic salts, charcoal may be conveniently employed as an antidote in cases of poisoning.—*L'Union Médicale.* X

THE MEDICAL PROFESSION IN SWEDEN.

IN Sweden there exists but one class of medical practitioners, who are styled "Doctors." The administration of medical affairs is confided to a Council of Health, one member of which is a doctor, endowed with the rank and privileges of certain municipal and military officers. This doctor is under the direction of the Council. The "hospital doctor" is under the orders of the directors of the hospital. The "military doctor" is under the immediate direction of the colonel of his regiment. Medical instruction is gratuitous in the "faculties" of Upsal and Lund. The studies of the pupils terminate by an examination at the Institute of Medicine and Surgery at Stockholm. After this the new "doctor" may enter the service of the State, or is free to establish himself in any part of the kingdom. Legal medicine is practised by the "municipal doctors," under the superintendence of the Council of Health.—*L'Union Médicale.* X

MEDICAL STATISTICS OF PRUSSIA.

AT the close of the year 1846, when the last triennial census was taken, there were in Prussia, on a surface of five thousand and eighty square miles, and with a population of upwards of sixteen millions of inhabitants, five thousand one hundred and thirty-seven civil physicians, and three hundred and fifty-one military physicians; eight hundred and twenty-five surgeons of the first class, one thousand one hundred and forty-four surgeons of the second class, one thousand four hundred and twenty-three *pharmaciens*, and eleven thousand five hundred and thirty-nine midwives. From this census it thus appears that in Prussia there was one physician to every square mile, and to every three thousand inhabitants; one *pharmacie* for eleven thousand inhabitants, and one midwife for fifty-four births. But this distribution does not obtain everywhere. There are districts with only one physician to ten, twelve, and

ten to fifteen square miles, and from thirty to forty thousand inhabitants. Such is the case in western Prussia, in Pomerania, and Upper Siberia, while in Berlin, to a population of four hundred and ten thousand, there are three hundred and eighteen civil physicians, forty-one military physicians, twenty surgeons of the first class, fifty-one of the second class, thirty-four *pharmaciens*, and fifty were midwives. X

THE ALLEGED MURDER OF DR. PARKMAN AT BOSTON.

THE American papers just received have later accounts of the dreadful tragedy enacted at Boston (Massachusetts.) The inquest on the remains of Dr. Parkman lasted ten days. A large number of witnesses were examined, and the evidence taken covered eighty large foolscap pages of writing paper. The result of the investigation, as our readers will anticipate, was unfavourable to Professor Webster, who now stands charged with the crime of wilful murder by the following special verdict of the coroner's jury:—"An inquisition taken at the city of Boston, within the county of Suffolk, the 13th day of December, in the year of our Lord 1849, before Mr. Jabez Pratt, one of the coroners of the said county, upon the view of sundry parts of the body of a dead man—viz. a thorax, kidneys, pelvis, two thighs, left leg, and sundry bones, there lying dead, by the oaths of Osmyn Brewster, John L. Andrews, Pearl Martin, Thomas Restieux, Lewis Jones, and Harum Merrill, good and lawful men, who being charged and sworn to inquire for the commonwealth, when, how, and by what means, the said dead man came to his death, upon their oaths do say—that they all have been demonstrated to be parts of one and the same person; that these parts of the human frame have been identified and proved to be the remains and parts of the dead body and limbs of Dr. George Parkman, late a citizen of said Boston, aged about 60 years; that he came to his death by violence at said Boston, on the 23d day of November last, or between the hour of one and a half of the clock in the afternoon of that day (about which time he entered alive and in good health into the Massachusetts Medical College building, situated in North Grove Street, in said Boston,) and the hour of four of the clock in the afternoon of the 30th day of November last (when a portion of the said remains were found concealed in and under the apartments of Dr. John W. Webster, of Cambridge, in the county of Middlesex, in said College building), in which building the residue of said remains were afterwards found; that he was killed in said College building by a blow or blows, wounds inflicted upon him with some

instrument or weapon to the jurors unknown, and by means not yet known to said jurors; and that said blow or blows, wound or wounds, were inflicted upon him, and said means were used by the hands of said Webster, by whom he was killed. In witness whereof the said coroner and jurors to this inquisition have set their hand and seals the day and hour above said." "The verdict of the coroner," remarks the *Boston Transcript*, "pronouncing Professor Webster guilty of the murder of Dr. Parkman, does not seem to have occasioned much surprise. For some days the public mind had been prepared for such a result, in consequence of developments to which we have already alluded, tending to show that the murder was premeditated. The coroner's jury have spoken their convictions freely and fully, without bias, we believe, from any opinion outside the room where their protracted and careful inquiry was conducted. It now remains to extend to the prisoner a fair trial before the high legal tribunal of the state; and we trust that the agitation which has existed upon this melancholy subject may be stilled during the interval. We learn that Professor Webster's appearance to-day is precisely the same which it has been of late; that although he has read the finding of the coroner's inquest it has not disturbed him in the least, and he remains perfectly calm and self-possessed. He is in good health and apparently quite contented in his situation, and satisfied with the treatment which he receives from the officers of the gaol. It has been reported that his cell was better furnished, and his fare more sumptuous, than that of other prisoners. We are informed that his accommodations are only improved by the allowance of some foot-mats; but it is true that his food is furnished by his friends from Parker's restaurant in Court-square. Professor Webster's time is wholly employed in reading and epistolary correspondence with his friends." Certain facts adduced at the inquest seem to show that there was cause for an exhibition of malignant feeling towards Dr. Parkman. However, the matter is now referred to the supreme tribunal, and for the present comment is suspended.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.877
 Thermometer^a 33.1
 Self-registering^b do. Max. 41° Min. 24.3
^a From 12 observations daily. ^b Sun.
 RAIN, in inches, '02.—Sum of the daily observations taken at 9 o'clock.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, Dec. 29.

BIRTHS.	DEATHS.	Av. of 5 Awt.
Males.... 618	Males.... 540	Males.... 563
Females.. 608	Females.. 513	Females.. 579
1226	1053	1162

CAUSES OF DEATH.

CAUSES OF DEATH.	Av. of 5 Awt.
ALL CAUSES	1058 1162
SPECIFIED CAUSES	1048 1158
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	176 307
Sporadic Diseases, viz.—	
2. Dropsy, Cancer, &c.	58 49
3. Brain, Spinal Marrow, Nerves, and Senses	135 125
4. Heart and Bloodvessels.....	40 40
5. Lungs and organs of Respiration	185 214
6. Stomach, Liver, &c.	43 65
7. Diseases of the Kidneys, &c.	15 11
8. Childbirth, Diseases of Uterus, &c.	17 10
9. Rheumatism, Diseases of Bones, Joints, &c.	2 8
10. Skin.....	2 1
11. Old Age.....	51 57
12. Sudden Deaths.....	45 12
13. Violence, Privation, Cold, &c.....	77 36

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	7	Convulsions.....	42
Measles.....	42	Bronchitis.....	78
Scarlatina.....	25	Pneumonia.....	69
Hooping-cough.....	24	Phthisis.....	115
Diarrhoea.....	9	Lungs.....	8
Cholera.....	0	Teething.....	5
Typhus.....	31	Stomach.....	6
Dropsy.....	19	Liver.....	10
Hydrocephalus.....	24	Childbirth.....	11
Apoplexy.....	44	Uterus.....	6
Paralysis.....	21		

NOTICES TO CORRESPONDENTS.

X.—Dr. F., like many other American writers, gives no reference to the source whence he quotes from M. Pellarin. It is very likely that the French author constructed his theory from what he saw in an English journal.

X Z.—In a moral point of view, the misrepresentation was fraudulent; but it is doubtful whether it would be so ruled in a Court of Law, because, in either case, the party would be illegally practising as physician, although no penalty would attach to him for thus designating himself. It is a misrepresentation, but query whether it be one *ad damnum*, a point to which a Court of Law would closely look. The M.D. of any University may call himself a Physician;—and a Member of the College of Surgeons, practising as an Apothecary, may, without imputation of fraud, call himself a "Consulting Surgeon." There would, however, be good reason for taking legal proceedings, if it could be proved that there was a "fraudulent representation of the character of the practice." A man acting as an "apothecary," without a license from the Society, cannot sell his practice as that of a "physician;" and, if he does not possess the Extra-license of the College of Physicians, he has, legally speaking, no physician's practice to dispose of. On this point the opinion of Counsel should be taken; and we would recommend Mr. Samuel Warren, who has studied medicine, and is well acquainted with the anomalies of medical law.

Will Mr. Teale oblige us by forwarding his paper on Trusses?

The very singular case forwarded to us by Dr. Sieveking shall be published next week.

Fellows of the Royal College of Surgeons and Druggists.—Mr. William Potts, South Audley Street, has written to us in reference to the paragraph on this subject which appeared in our last number. We have to assure Mr. Potts that he is *not* the person alluded to in the paragraph. We shall take an early opportunity of showing that the Fellows of the College are not sufficiently careful in granting certificates for the fellowship examination.

Lectures.

COURSE OF SURGERY.

Delivered in the years 1846 and 1847,

BY BRANSEY B. COOPER, F.R.S.

Surgeon, and Lecturer on Surgery at Guy's Hospital.

LECTURE LXXIV.

THE VENEREAL DISEASE.

Virulent Syphilis, continued—*Irritable chancre—Characters of—Treatment by opium, by mercury, &c.—Phagedenic chancre very similar to the irritable—Distinguishing marks of this kind of chancre—Treatment—Use of nitric acid—Case—Gangrenous chancre—Peculiarities of—Treatment—Non-virulent bubo—Description of—Treatment by repellent remedies, by remedies to produce suppuration—Virulent bubo—Characterised by induration—Progress of the disorder—Diagnosis of virulent bubo—Treatment—Secondary symptoms constitutional—Sore throat—Peculiar appearance of the inflammation in—Treatment—Venereal cutaneous eruptions—Different varieties of—Particular symptoms of each—Treatment—Conclusion.*

I HAVE laid it down as a principle, whenever the plan could be adopted, to attempt the cure of a chancre constitutionally by the exhibition of mercury, without the aid of any local application, and this for the reasons which I have already stated; but it is not always that I have been enabled to carry out this plan. A syphilitic sore, as well as one of any other character, may assume an irritable, phagedenic, or gangrenous condition; under which circumstances it would be necessary to subdue those actions, both by local and constitutional remedies, before mercury could be given to act upon the specific character of the sore.

Irritable chancre.—This form of syphilitic sore is indicated by great sensitiveness to the touch, tendency to bleed, and by glassy and exuberant granulations, the whole sore being surrounded by an inflamed areola. Opium is the best remedy to be employed in these cases, but it must be given in repeated doses: at the same time, the nitrate of silver should be applied to the surface of the sore. If, after this treatment, the irritability be subdued, but the peculiar induration of a syphilitic sore still remain, mercury must be administered, in the same manner as in a case in which the

irritable condition had never existed. In some instances of irritable chancre, where I have combined calomel with the opium, for the purpose of preventing the constipating effect of the narcotic I have found this combination not only equally efficacious with the opium alone in curing the irritability, but at the same time it cures the syphilitic character of the sore, and have even found its continuance after the irritable symptoms had been relieved sufficient to complete the removal of the syphilitic character also. This plan cannot, however, always be adopted, as certain constitutions are so extremely susceptible to the purgative influence of calomel.

Phagedenic chancre.—This is closely related to the kind of chancre I have just described; but, instead of being characterised by extreme sensitiveness of surface, it is marked by the rapidity with which it ulcerates; so that the increase of the sore surface is the source of action in such cases. Having first well opened the bowels, to make sure that there is no accumulation of feces in the intestinal canal, repeated doses of opium are to be given, and soothing fomentations applied to the sore. Should the vital powers of the patient be depressed, bark, ammonia, and even a little wine, may be safely and judiciously prescribed; but if, on the contrary, the condition of the sore is at all referable to a plethoric state of the system, antiphlogistic means must be adopted; and, should not such constitutional treatment prove effective in checking the progress of the ulceration, I am in the habit of applying concentrated nitric acid, which I have rarely found to fail in these cases. I lately attended a case with Mr. Parrot, jun., of Clapham, who had carried the use of sedatives and tonics to the fullest extent, paying due attention at the same time to the state of the bowels, without being able, however, to check the progress of the disease. One application of nitric acid by the point of a glass rod proved sufficient to check the ulceration; and, under the subsequent exhibition of mercury, the patient recovered.

Gangrenous chancre.—This form of chancre is to be treated much in the same manner as any other gangrenous sore, depending as it does more frequently upon constitutional than upon local causes. The first object should be to secure the free evacuation of the bowels: stimulating poultices should be applied immediately on the sore, such as black wash, nitric acid lotion, or stale beer grounds, the patient being kept in the recumbent posture. Ammonia, bark, or serpentary, with wine or porter, are usually indicated;

although in some few cases I have met with gangrenous chancres in persons with such a temperament as to preclude the propriety of the exhibition of stimuli, and which have, indeed, required sudorifics and opiates, uncombined with the latter class of medicines.

In my description of gonorrhœa I did not treat the subject of bubo, as this affection may arise equally as the result of syphilis or of gonorrhœa; and, as it is a matter of great importance to form a just diagnosis between the bubo arising from a non-virulent and that from a virulent disease, I thought it better to leave the subject until I had described chancre.

Non-virulent bubo is that which attends simple gonorrhœa, and may be considered as arising from common inflammatory action, extending in the course of the absorbent vessels of the penis to the glands of the groin: this disorder is to be treated as phlegmonous swellings in other parts of the body, either by repellants for the purpose of preventing the formation of matter, or by fomentations or poultices to produce suppuration, when that termination seems to be threatened by nature. By repellant remedies I mean those which have a tendency to repress the formation of matter, such as leeches and evaporating lotions: by means of these we may succeed in preventing suppuration, but there sometimes yet remains a permanent indurated condition of the swelling, which may excite apprehension in the mind of the surgeon as to its having been produced by a specific virus, a chancre existing within the urethra. A bubo of this kind may, however, result from a mere strumous habit; and if so, the hardness readily yields to the exhibition of iodine and iodide of potassium, and such dietetic rules as generally improve strumous constitutions; while, on the contrary, if the hardness depends upon the action of a specific poison, a mercurial course is, in my opinion, the only safe mode of treatment.

A virulent bubo is marked by the same characteristic induration as a chancre itself, and the presence of this induration must inevitably give rise to the question of the virulent or non-virulent nature of the disease. The mere phlegmonous bubo has always a tendency to suppurate; while the virulent bubo, on the contrary, seldom manifests this disposition; and, therefore, its permanent hardness, uncombined with any symptom of suppuration, is a further proof of a virus having been the origin of the bubo. The virulent bubo goes on to ulceration; but even this is not conclusive, for strumous ulceration not unfrequently occurs in persons of a scrofulous diathesis; therefore, as Ricord observes, there is as

much difficulty in forming a diagnosis between the virulent and non-virulent bubo as between the virulent and non-virulent sore; and he maintains that by inoculation, and by that test alone, can a certain conclusion be arrived at. The same objections arise here as I have before described when speaking of doubtful sore—viz. the difficulty of healing the factitious sore; nor, indeed, does it always occur, as Ricord himself acknowledges, that the sore produced by a viscus invariably puts on the decided characters of a virulent ulcer; so that, indeed, the same difficulties may still result in forming a just diagnosis as existed before the experiment was tried. In my own practice, therefore, when the bubo puts on all the characters of a virulent or specific action, I commence at once with the cautious administration of mercury, not unfrequently combining with it small doses of iodide of potassium, abstaining at the same time from the use of any local application to the ulcerated bubo, which might tend to conceal the characteristic appearances of the sore. If the mercury be producing the desired effect, the ulcerated surface of the swelling acquires a healthy appearance, indicated by the growth of soft red granulations, by the absence of any tendency to eversion of the edges of the sore, and by a general softness of the whole base of the tumor; indeed, the characteristics of the healing sore are as strongly marked as were the peculiarities which had before indicated its virulence. The mercury should be continued as perseveringly, until all induration has disappeared, as in the cure of a primary chancre, or secondary symptoms will be sure to supervene.

On a cursory view, regarding merely the variety of appearances under which syphilis presents itself, it may perhaps appear that I have treated it with less consideration than is demanded by the importance and difficulties of the subject; but as it is admitted that these difficulties principally arise from the peculiarities in the constitution of the patient, rather than from any difference in the specific action of the poison, it is impossible to lay down general rules beyond those which I believe to be invariably indicated—viz. the administration of mercury, modified and combined with the other remedies appropriate to the case; and I can safely say, after the experience of twenty-five years of hospital and private practice, that the principles I have given are those by which I have always been guided, and which I have always found efficient to the object in view. In primary syphilitic sores, if they be only of three or four days standing, I at once apply concentrated nitric acid, which has always

proved sufficient to destroy the virus, and I have in no instance known secondary symptoms to follow this treatment. If the sores be of longer standing, and, both from the history of the case and their appearance, there be just reason to suspect a syphilitic origin, I at once commence with blue pill night and morning, abstaining, as I have already mentioned, from any local application, taking the appearance of the sore as the indication of the effect of the mercury upon the constitution: again, in sores which, from their appearance and the history of the case, are of doubtful character, I employ constitutional and local means, as indicated by the peculiar temperament and diathesis of the patient, as well as by the conditions of the sore itself. In such cases I prescribe Iodide of Potassium, Bark, with Nitro-muriatic Acid, Sarsaparilla, and similar remedies, applying merely warm water dressing to the sore; and if such means do not prove effectual, I then resort to small alternate doses of mercury, placing the patient at the same time under strict dietetic discipline.

With all these precautions, however, it sometimes happens that, although the primary sores may yield to the treatment adopted, secondary symptoms will result; in my own experience I should say that this untoward event occurs either in consequence of the mercury having been discontinued before the induration of the sore had entirely disappeared, or from some peculiarity in the constitution which prevented the specific effect of the mercury upon the disease. There is sufficient reason to suspect the existence of this latter condition when the virulent ulcer remains unchanged in its appearance after mercury has been exhibited for the period usually sufficient to produce its effects; and at the same time, when no pytalism is present in these cases, I leave off the use of mercury internally, and make the patient rub in mercurial ointment, which rarely fails to produce the desired effect; but even in this case the mercury must be continued until all induration of the sore has vanished.

Secondary symptoms.—If we fail from any cause in eradicating the specific virus of a primary sore, although at the same time we may have succeeded in producing its cicatrization, constitutional symptoms supervene, and what are termed "secondary symptoms" are established: these may be the result of a primary chancre in the individual affected, or they may be hereditarily communicated from the mother to the infant, although it may also happen that the infant might be at birth inoculated by a chancre in the vagina of the mother,

and secondary symptoms ultimately result from that contamination.

Secondary symptoms, when they take place from uncured primary affections, in consequence of the admixture of the virus with the blood, do not, as Hunter has said, seem to produce a general constitutional effect, for during the influence of the poison every vital function seems to be perfectly performed; but owing to the susceptibility of certain parts to be affected by the venereal poison, a train of local symptoms present themselves: thus, the mucous membrane of the throat and tonsils, the skin, mucous membrane of the mouth, nose, and the iris, seem to be successively affected. It has been said that there is a second order of parts liable to be consecutively affected,—as the periosteum and fibrous tissues generally, even the bones themselves,—but I am inclined to believe that such affections depend upon the action of mercury in peculiar constitutions, especially in those of a rheumatic or gouty diathesis. Under ordinary circumstances the parts which seem especially prone to be affected by this form of syphilitic disease are mucous membranes and skin; and, as far as I have seen, the sore-throat generally precedes the cutaneous eruptions. From about six weeks to two months, and even sometimes longer, after the primary symptoms appear to have been cured, the patient generally begins to complain of an uneasy sensation in swallowing, attended with more or less dryness about the fauces. Upon examination an erythematous blush will be seen extending over the mucous membrane of the soft palate and tonsils, but which can scarcely be distinguished from the inflammation concomitant with simple sore-throat; unless, perhaps, it may be said that the mucous membrane has somewhat the appearance of being raised from its subjacent tissues, and that it is less vivid in colour than in common inflammation, and this is unattended by enlargement of the tonsils themselves.

When I see these symptoms, I at once examine the cicatrix of the primary sore, and also the chest and abdomen, to ascertain if there be any venereal blotches: if I find any thing approaching to an abnormal induration in the cicatrix, I order mercury, and if the patient had taken it internally before, I usually direct him to rub in mercurial ointment, taking it for granted that the secondary symptoms indicate the failure of the mercury, before taken internally, in destroying the specific syphilitic poison; but if there be no such induration of the cicatrix nor venereal blotches, and if I learn from the history of the case that the patient has not taken the mercurial poison,

tended to, I prescribe the following mixture:—℞ Iodini, gr. ss.; Potass. Iodid. ʒss.; Papav. Syrup. ʒss.; Inf. Gentian. Co. ʒviij. M. Capiat cochl. larga, ij. bis quotid.

Should I have any doubt of the accuracy of the patient's account of his case, I prescribe, in addition to the above mixture, three grains of Plummer's pill at bed-time.

If the erythematous blush still continue, it will soon begin to ulcerate, generally beginning on one of the tonsils, and sometimes in the velum palati or uvula: in such cases I first prescribe the mixture as above, and if the sores then heal, but if the patient be of delicate constitution, I give him bark, with nitro-muriatic acid, to improve his general condition; and should the symptoms of sore throat again return, I order Donovan's solution, as follows:—℞ Sol. Iodid. Hydrarg. et Arsenici, ℥iv.; Sarsæ Ext. gr. x.; Sarsæ Decoct. co. ʒss. M. ft. haustus bis quotid. sumendus.

This remedy I have found of the greatest use, and in these cases it far surpasses, in my opinion, the iodide of potassium, which seems to suspend the diseased action for the time rather than to remove it from the system.

The erythematous syphilitic condition of the throat, which I have just described, sometimes passes into a chronic form, and then seems especially to attack the mucous membrane covering the middle constrictor of the pharynx: the true erythematous blush can scarcely be recognized, but the membrane puts on a streaky white appearance, and the patient complains more of an uneasy dryness of the throat than of pain in swallowing: if this condition be not removed, cutaneous eruptions are almost sure to follow. I give, therefore, Donovan's solution in these cases, and not unfrequently paint (with a camel-hair brush), the affected mucous surface, with the solution of nitrate of silver.

I have sometimes known patients thus affected become quite deaf without any enlargement of the tonsils, which leads me to believe that the inflammation sometimes extends along the Eustachian tube. In some few cases I have found it extremely difficult to cure ulcerations of the throat resulting from secondary symptoms; and in these, the remedies I have described seem almost inefficient. This occurs more especially when ulceration extends to the mucous membrane of the larynx, and probably the difficulty arises from the continuous motion of that organ, which interrupts nature's efforts at reparation. I have found the fumes of the red oxide of mercury, inhaled by means of an appropriate apparatus, very effective in these cases; and I believe, should this not have the desired effect, nothing is left to be done but to per-

form the operation of tracheotomy, with the object of placing the inflamed and ulcerated mucous membrane in a condition in which it can remain in a perfect state of rest; as unless the ulceration is checked, the death of the patient must inevitably take place.

I acknowledge that I have never myself performed the operation of tracheotomy with this view, but I once advised its adoption in the case of a gentleman at Woolwich: he would not, however, consent to its being performed, and died six weeks after from the continued progress of the disease.

Veneræ cutaneous eruptions.—In this form of "secondary symptoms" a doubt always arises in my mind as to whether the eruption can be attributed to the immediate action of syphilis, or whether it may not be regarded as the result of a constitutional tendency, only developed by the action of the syphilitic poison, and the appearance of the eruption being also modified by the same agency. Perhaps the most common form of cutaneous eruption in syphilis is the papillary, as lichen, which is to be distinguished from the idiopathic disease by the dirty copper brown colour of the skin, and the peculiarly superficial appearance of the stain, which gives the idea that it may be easily removed by washing. It is also much less irritating than the ordinary disease. The papular is the form which the disease usually assumes in children. This eruption will sometimes pass into the pustular form, which renders its classification difficult; but still the specific colour sufficiently stamps it as a venereal eruption.

In this form of eruption, Plummer's pill, and large doses of sarsaparilla, are the remedies which I generally employ: sometimes, however, I give small doses of the bichloride of mercury, with the sarsaparilla, in the place of the Plummer's pill.

I think I have found the scaly eruptions appear next in order in point of frequency to the papular just described, and have sometimes seen pityriasis in the first eruption of venereal disease; but the character of the disease is then likewise marked by its peculiar copper colour: it sometimes commences as a smooth elevation or as a dirty blotch before it passes into its scaly position.

Lepra and psoriasis are also common forms of secondary scaly eruptions, modified, however, in appearance by the venereal poison.

Thesquamous diseases I invariably treat with mercury, but have lately employed the mercury in combination with iodine and arsenic, under the form of Donovan's solution.

The tubercular form of the venereal disease comes next in order, and usually presents itself as a cone, constituting a ~~distinct~~

hard inflamed tubercle, having a tendency to slowly suppurate. The tubercles appear especially on the forehead, face, neck, and shoulders, but rarely attack the lower parts of the trunk. Their specific characteristic is, as in the other kinds of eruption, indicated by a peculiar dusky colour: the venereal taint is, however, sometimes very difficult to distinguish, when the eruption appears in those whose constitutions have been broken down by hard drinking; and the diagnosis is important, as mercury is the appropriate remedy when the disease is influenced by the venereal poison, but quite inappropriate when the disease appears as a consequence of dissipation. Lastly, there are two other forms of venereal cutaneous disease, but these have generally been considered as tertiary in character, although I confess that I do not distinctly understand what is meant by "tertiary symptoms;" but if it be true that these eruptions be neither capable of being propagated by inoculation nor hereditarily, they deserve a distinct place in the category of venereal disease: the eruptions to which I allude are impetigo and ecthyma of the pustular, and rupia of the vesicular order. These diseases are not to be treated by mercury, but by iodine and the iodide of potassium, and when the vital powers of the patient are greatly diminished bark and the mineral acids are indicated; but generally change of air, especially to that of the sea-side, seems to prove the most effectual remedy, at the same time iodide of potassium ought again to be given when the constitution of the patient is sufficiently restored. Of iritis I shall not treat: this belongs rather to the province of my colleague, Mr. France, and here I may say that in this point, as well as those connected with ophthalmic surgery generally, you cannot do better than follow attentively his precepts.

Of the diseases of the bones which are said to result as a secondary effect of syphilis, I can only remark that I have for years doubted the truth of the doctrine itself, as I have never known the bones to become diseased unless mercury had been exhibited; and I can hardly bring forward a better proof of this than the fact that, in former times, when such enormous quantities of mercury were given for the cure of syphilitic disease, the affections of the bones were almost as common as syphilis itself; while now, on the contrary, when the employment of mercury has been so judiciously modified, diseases of the osseous system are but of rare occurrence.

Original Communications.

THE

CHOLERA IN PLYMOUTH.*

By WILLIAM F. SOLTAU, M.B.

of Coll. Ball. Oxon.

THE numberless papers on the above subject which during the last few months have appeared in the various medical periodicals of the day, must have well nigh tired the minds of their respective readers, and render it necessary that some apology should be offered for once more introducing it in the above form. When the disease threatened us with its possible visitation, it was well that we should be prepared to meet it, by arming ourselves with the joint experience of former years. When it came, no wonder that the medical press should teem with matter connected with its every detail, its symptoms, its various stages, its peculiar characters, its treatment. But now it is gone, whence the necessity of reverting to such topics? Seventeen years had well nigh passed away from its first invasion into this country, and though rumour had from time to time whispered its lingering sojourn amongst us, and some isolated cases claimed an identity with it, yet it had been fairly expunged by the united experience of the profession from the lists of epidemics peculiar to our land. But again its dark cloud appeared in the distance; again its thunder was heard in the lists of victims that it had made its prey, and on it came till it rested only to break over our heads. Like the mighty storm which in rapid strides sweeps with merciless fury over the face of nature, and in one moment becomes lulled, leaving us in the stillness of the calm to contemplate its nature in the devastation it has left behind, so again has this mysterious disease vanished from amongst us, disappearing with as much suddenness as it came, but leaving the bills of mortality as lasting monuments of its fatal visitation. Though dead, then, it still speaks to us; and though extinguished,

* We regret that, owing to various circumstances beyond our control, we have not until now been able to find room for this useful statistical paper.—*Ed. Gaz.*

its spirit may yet linger in its ashes, awaiting only an opportunity to arise, like the fabled phoenix, with power increased rather than diminished to do its work amongst us. Shall we, then, strive to forget it whilst absent from us, as though it will be time enough to resume the subject when it returns? Let us rather as a body imitate the example of military wariness, and, in the absence of the enemy, consult with one another as to the best system of defence we can adopt should we again be invaded by it. If the mysteries which surround the history of cholera are ever to be solved,—if the questions connected with its several phenomena are ever to be answered,—in a word, if its strange eventful history is ever to be known, it will be learnt in the united experience of the profession at large. Every one of us has a duty to perform in the matter: whether he has had much or little to do with the disease, still he must contribute his quota. The College of Physicians have virtually declared this in a circular which they have addressed to their members; but it appears to me that they have erred in limiting their inquiries to those who belong to their body; for, if one may judge of other towns by this, their questions will be returned to them unanswered, from the fact that the greater number of the profession who have seen most of the epidemic during its late visitation are not attached to their College. Out of the sixteen medical men in Plymouth who were appointed to the several districts into which it was divided, of whom six were physicians, not one was on the College list; therefore, as far as the required information above referred to is concerned, this town will have afforded none, as the circular has been forwarded to none of us who were actively engaged during the prevalence of the epidemic, and who consequently are best able to give the necessary replies to the several inquiries therein contained. Feeling this to be the case, I venture to contribute my limited experience in the history of cholera through the medium of your columns, should you think it worthy of a place therein; and I shall treat the subject first by giving a brief sketch of the disease as it prevailed in our town, then say a few words on its treatment as pursued by myself, and conclude by offering some hypothetical and practical

conclusions deduced from its phenomena as witnessed by me.

Up to the beginning of June, the town had been entirely free of the disease, which, however, had broken out in a village, called Noss, situated on an estuary about eight miles from us. It here assumed a most malignant character, and, out of a population of 300, carried off 90. We may mention, in passing, that Noss was not visited by a single case of the epidemic which prevailed in 1832, though then, as now, noted for the filth and dirt of its inhabitants. On Saturday, the 9th of June, a case of cholera was asserted to have occurred in Stonehouse Lane,—a locality in Plymouth answering in every respect to St. Giles's in London. Hearing that such was the fact, I visited the house where the patient was said to be, and found that the report was too true. On inquiry, I learnt that he was an Irish emigrant, who had been landed the previous evening at his own request, and had been brought to one of the small inns abounding in the above-named quarter. The disease was well marked in all its features, and rapidly proved fatal. Another week had nearly elapsed, and the disorder had not spread. On the following Thursday, however, the wife of a respectable tradesman died of the disease. It is curious, in connection with the history of this case, that many of the poor from the village of Noss were in the habit of buying their bread at her shop, and, though naturally nervous and timid about the disease, she would talk with them, and question them relative to the pestilence then raging in their village. From this time until the 9th of July there were a few scattered cases reported to have occurred in different parts of the town, but the disease had not yet assumed an epidemic character. Like the big drops of rain which precede the coming thunder-storm, to give warning, as it were, of its near approach, these were considered to be premonitory of the pestilential hurricane that was coming upon us to sweep away, with its devastating blast, those that were predisposed to the influence of its noxious power. Still some there were who hoped that the cloud would not break over us, and who regarded the probable increase of the disease as the dismal forebodings of the mind that loves to anticipate evil. It was not long, however, ere the ques-

tion was to be settled. On the 10th of July one of the parochial medical officers signified to the guardians of the poor that, from a sudden outbreak of cholera in Stonehouse Lane, he was called upon to visit more cases than it was possible for him to attend to, and, without delay, another medical man was appointed to assist him in his labours. It should here be mentioned that early in June an emigrant ship had entered our sward with cases of cholera on board, and, being crowded with passengers, it was thought advisable to remove them into two hulks lent by the Admiralty: one to receive the healthy, the other the infected, whilst the ship underwent a thorough process of fumigation and cleansing; and by these judicious measures the disease, which before raged with much severity, abated, and the ship was soon able to continue her voyage.

But to return to our town. The 10th of July may be considered to be the date of the great outbreak of cholera amongst us, and Stonehouse Lane the scene of its ravages. Within a week 220 cases were reported to have occurred, most of them within a few yards of one another. Quarry Lane and Court, a part of the above locality, have been ever memorable in the annals of epidemics, from time to time visiting this town, and in connection with the pestilence that has just left us their name strikes the ear with peculiar horror. The class of persons residing therein are the lowest order of Irish. Filth seems as natural to them as their daily food, and the condition of the rooms they occupy baffles all description. Without any furniture, not even a broken chair or table, without a bed to lie upon, or bedding to cover them, the rooms they occupy present a picture of wretchedness not even witnessed in the most poverty-stricken of our country. Their bed, if such it is to be called, consists of shavings or straw strewn on the bare floor, and their covering is little else than a collection of rags or worn-out garments. Their daily fare, too, is little better: dry bread, and that in quantity far short of nature's demands, is their chief support: this is often in scraps, such as they may have procured in begging from door to door. It would be difficult to state the number of persons that live in the separate rooms let out to different people in each house.

They vary sometimes weekly, sometimes daily. In one of the rooms, measuring twelve feet by ten, there were as many as nine persons found living together when cholera broke out amongst them, and of these five died.

The scenes witnessed in this and similar houses baffle all description. In order to visit these poor creatures, the medical man was obliged to step over the one to get to the other. In the middle of the room there was one common receptacle for the evacuations of the infected, who had to lean the one over the other to reach it when the necessities of nature came upon them; so huddled were they together. When we think for a minute of the cholera with its most aggravated symptoms,—of patients attacked by it without a single ordinary comfort,—of the class of persons thus selected for its victims,—of the hovels inhabited by them,—of the crowded, ill-ventilated, low apartments wherein they lay,—we then have but a very distant conception of the reality. In rooms like these it was difficult to discern between the dying and the dead. The Irish, too, are always noisy in grief. In the dead of night, on entering these pestilential dens, the death of one or more would be announced to the charitable visitor in the discordant yells of the wake. In the midst of the dying, honour must be paid to the dead. With a rushlight in a broken bottle at the head, and another at the foot of the deceased, sat the friends assembled for the purpose; and this, too, in the midst of the pestilence, and in its very presence. Here, then, was ground on which the disease must grow; it had here its very hot-bed. The news rapidly spread through the town that the plague had begun, and in the quarter and in the manner thus described. There were those who would not believe that things could be so bad, nor were they to be satisfied until made eye-witnesses of the scene itself. It may here be mentioned that the supply of water to Quarry Court and Lane is most inefficient, there being only one small pump for the supply of the several houses. In front of the windows is an open gutter, and an ash-pit, which receives the dirt of all the houses. A cess-pit, covered with a roof, is the only privy, and the effluvia constantly emanating from it finds easy ingress through the doors and windows. With the ex-

ception of the open gutter there is no drain to the court.

What, it may be asked, was done to meet the emergency of the case as above described? A Board of Health had been formed about a fortnight previous to this outbreak, and they lost no time in rendering every assistance. It must be evident to every one who reads the above description of the miserable condition of the poor in the district where the cholera broke out, that medical aid could be of little avail where such conflicting circumstances were opposed to it; they may, and in fact do, so often favour the progress of disease, that until they are removed remedies are comparatively useless. The whole College of Physicians, with their united skill, could have effected but little good in the treatment of patients circumstanced as these were,—for amongst them the disease had wherewith to feed and grow. It was like a fire raging in the midst of combustible materials, the most powerful supply of water availing but little to assuage its fury. The skilful fireman well knows this, and his first object is to cut off its communication with every inflammable substance, thereby taking away the supplies on which it feeds, and then he proceeds to work his engine with due effect. So with regard to the late pestilence. It was evident that no good result could be expected to follow, as long as those suffering from its effects remained in a condition which favoured its growth, and afforded it the very food on which it is known to thrive. Acting upon this principle, the Board of Health without delay erected a temporary hospital, and fitted it up with every convenience necessary for such an emergency. This measure forthwith mitigated the virulence of the disease, and many who were removed from their abodes of wretchedness, poverty, and filth, even in its last stage, are now living to attest the excellency of so judicious a measure. Nor was the rest of the town forgotten, whilst the attention of those in authority was especially fixed on the scene in Stonehouse Lane. Measures were immediately taken to be beforehand with the disease in other parts, and the town was divided into fourteen districts, to each of which a medical officer was appointed, to whom the poor were to apply for advice, if labouring under the slightest premonitory

symptoms. It was agreed upon by the Board of Health that the sum of half a guinea should be paid to the medical men employed, for every case of cholera, and choleric diarrhoea, all medicines being provided at the expense of the Board, by the various chemists of the town; and this system was adopted for more than three months. It would have been imagined that with such a frightful disease threatening them on all sides, with the caution most properly issued, through public placards, by the Board of Health, to beware of neglecting the slightest premonitory symptom, together with the offer of medical advice and remedies free of expense, the lower orders would scarce have failed to have taken alarm, and have checked the disease at its onset. But, instead of this, many allowed the early symptoms, in themselves or their friends, to pass unheeded, and delayed seeking proper advice until collapse rendered the case hopeless. This was the history of almost every fatal case that came under my notice, and when remonstrating with the friends, I was usually told in reply that they did not like to trouble, and that they thought that there was not much amiss because there was no pain, or the patient was free from cramp. When these had occurred, they had lost no time. By such delay many a valuable life was sacrificed. In some instances a prejudiced fear prevented a prompt application for medical aid. There existed in the minds of several of the lower orders a firm persuasion that the remedies administered in cholera put patients into a sleep from which they never awoke. I have seen them hesitate ere they would take the medicine proffered them, and at the same time I have been asked whether the pill I had given them was not one of *those pills*. On asking the meaning of such a question, I have been referred to "those pills about which there had been so much talk, which such a person had taken, and never spoken afterwards, and which had such an effect upon another, that he had slept to death." Now the fact is, that the prostration of collapse is not to the inexperienced eye unlike the stupor resulting from opiates, and the rapidity with which this sometimes comes on strikes the cursory observer as something so very unnatural, that he sets it down to the effects of remedies, instead of the disease. These, and a-

milar delusions, ever more or less existing in the minds of the uneducated, though under ordinary circumstances they are harmless in their results, yet in instances like the above prove their evil tendency.

From the 10th of July the cholera may be considered to have established itself in Plymouth. The medical men to whose care were confided the several districts of the town, in order to secure to themselves rest at night, and enable them to go through the increased duties of the day, arranged amongst themselves to take it by turns to sit up at night. For this purpose a room was provided at the Guildhall, where the poor were directed to send between the hours of 11 P.M. and 6 A.M. But for this plan we should not have been able to have fulfilled our duties, as the incessant toil by day would otherwise have been carried on through the night, and who had physical energy enough to bear it? The cholera had been two months in Plymouth, but in no other part of the town had it assumed the violent form which characterized it in Stonehouse Lane, until the 14th of September, when it suddenly burst out, in a house containing upwards of forty inhabitants, in Higher Street. It happened to be my night at the Guildhall, when the second case occurred in that street, and I was sent for to visit it at 4 A.M. on Saturday the 15th. The person attacked was the wife of a milkman, and when I saw her she was in the first stage of the disease. Having prescribed for her, as I was leaving her room I was requested to go up stairs and see another person who was reported ill, but I found her symptoms were those of fright, her aunt who lived below her having died the preceding evening of cholera. On making further inquiries I discovered that the body had not been put into a coffin, but had been allowed to remain up to that time in a close room, the boards of which, forming its ceiling, were so far apart as almost to enable me from above to see what was going on below; thus affording free egress to the pestilential effluvia. I almost predicted the result, and I was not surprised on the following day (Sunday) to hear that the seeds thus sown had already sprung up. The ground in which they had fallen was just then are their rapid ventilation, have ever

been found to form a soil in which cholera flourishes the most. Thus one could state almost with perfect certainty where in one's district the disease would spread if it once broke out, or where no apprehension need arise if an isolated case occurred. There were certain localities which were as nests to the pestilence, wherein it hatched its brood. And what were the nature of these? The same wherein during all seasons—scarlatina, small-pox, and typhus, will be found to prevail; inhabited by the half-starved, whose poverty is a pretext for their filth, whose abodes are little better than pigsties, and whose physical condition is learnt in their squalid, wan, and emaciated countenance. And such was Higher Street in its every characteristic. Within 24 hours between forty and fifty cases occurred in it, out of a population of between three and four hundred. So sudden was the outbreak that the Board of Health were taken by surprise, but in order to lose no time they empowered the medical officers of the district to engage any suitable place as a temporary hospital to which the sick might be removed. In the hurry of the moment they selected some lofts adjoining a building in which certain chemical works were carried on, the precise nature of which was unknown to the public. To this place the cholera patients were carried; but within a very short time it was discovered that the products of the neighbouring manufactory were of too deleterious a character to permit persons living so near them. The medical men, as well as the patients, were seized with certain anomalous symptoms, proving that such was the case, and the death of a child who had recovered from cholera settled the question. An inquest was held on the body of the deceased, and the jury came to the conclusion, from the medical evidence, that the cause of death was arsenic. The patients were immediately removed from the lofts to the hospital which had been erected at the first outbreak of the disease. Between forty and fifty died of cholera in this small street, within a very few days, seventeen in one house; and but for the prompt removal of the infected to a more commodious and healthy spot, the mortality would have been much greater. Though only two streets have been hitherto mentioned in which the cholera prevailed, yet it must not be imagined that

it did not visit other districts of our town. In Plymouth, as in every other place where it is found, it showed its predilection for those spots which are noted for filth, the poverty of their inhabitants, and bad drainage, spots round which fever ever hovers, and epidemics rage. In my own district, the chief scenes of my labours were confined to two or three lanes with their adjoining courts; of these one was preeminently marked both in the number of persons attacked, and the malignant character of the disease assumed. The place referred to is a back lane, called John Lane, in which there is no drain, either private or public, and connected with it are three courts, each containing seven or eight houses. Most of the persons in this locality had an attack of the disorder in some shape or other. The most malignant case which I witnessed during the prevalence of the epidemic occurred in one of these courts, in the person of a man who had for months been in the greatest state of destitution, being one of those who could not work, and would not beg, and who would rather have starved than applied for parochial relief. He had subsisted on the kindness of a relation, himself a pauper with a large family, who had received him into his house, already tenanted by himself, his wife, and six children. There I was called upon to visit him, and found him in the last stage of collapse. He had been taken ill during the night; had been seen by the medical officer, who reported it to me as a case of choleric diarrhoea. The disease had seized on a victim just adapted to its choice. He was half starved ere it selected him for its prey: his abode, a dark and overcrowded hovel, surrounded by houses of a similar character, with no drain near them. His friends were aroused to a sense of the wretched condition in which he was, and urged his removal to the Cholera Hospital; but the symptoms had made such rapid increase, that when I first saw him he was dying, and I feared that in lifting him into the cot he would expire. He was not, as is usually seen in this stage, blue, but black, as though he had been sprinkled over with soot. Though I could do little for the dying, I directed my attention to the living; and, having persuaded them to leave the house without delay, the pestilence did not spread. Of the ill effects of over-crowding I had a

marked instance in one of the streets belonging to my district, in one of the houses of which the cholera had broken out in a child, whose early symptoms having been neglected, was not seen until collapsed. The house was large and the rooms airy; but, finding that the disease was spreading in a very severe form, on inquiry I learnt that more than seventy persons were residing under its roof. Four fatal cases having occurred within twenty-four hours, I applied to the Board of Health for a house of refuge, to which those in health might be removed. This was granted, and between twenty and thirty persons immediately left the house. From that time two severe cases only occurred, both of which did well.

The number of persons who have fallen victims to the cholera during its recent visitation at Plymouth has not yet been accurately ascertained. In all probability, however, nearly 900 have been taken away out of a population of 40,000. It is somewhat remarkable that a class of persons who, from their dissipated habits of life, it was expected would have been severely visited by the epidemic, were remarkably exempt during its prevalence amongst us. Plymouth abounds in a number of prostitutes of the lowest order, who reside in the vicinity of the quays and the citadel. Castle Street has from time immemorial been the favourite haunt of these abandoned creatures. They subsist entirely upon the wages of iniquity, and most of their earnings is spent in the gin-shop and low public-house. Their companions are the soldiers and sailors of our port and arsenal; and, when any ship is paid off, they are on the look-out to let as little money leave Plymouth as possible. Their ages vary from eighteen to five-and-thirty, and their number from two to three hundred. One would have almost pointed them out as the most probable victims that the disease would have selected. But such was not the case; for during the three months and a half that it raged here, not more than two or three died of it.

I saw one or two of them who were supposed to be labouring under the disease, but in neither case was it genuine cholera. On one occasion I was sent for to see a girl who had been picked up in the streets, having been seized, it was said, with sickness and diarrhoea on her way home. I found

her apparently writhing with the agonies of cramp. Her screams were audible in the street, and she had both vomiting and purging on her. Her's, however, was a case of "cholera ebriosis,"—the result of drink and fear; and a good mustard emetic soon brought her to her senses. Fear in this class of persons frequently gave birth to a set of symptoms resembling those of cholera; and it was difficult at first sight to determine the precise nature of the attack. The fancy, however, over-drew the picture, and worked the patient into a condition which far exceeded that witnessed in a genuine case of cholera. A kind of hysterical cholera was then produced, which, to the untutored eye, was more terrific in its symptoms than the real disease in its most malignant form. It was this excess of symptoms which revealed the nature of the disease, chiefly developed in persons of an hysterical and nervous temperament.

Of the 819 persons registered in Plymouth as having died of cholera, 394 were males, and 425 females. From this it will appear that here, at least, the disease has been more fatal amongst females, which has not been the case generally throughout England, according to the report of the Registrar-General recently published. Of these 819 persons, 269 were under ten years of age, 66 from ten to twenty, 376 from twenty to sixty, and 108 from sixty to a hundred. The population of our town since 1832 has increased about 8,000. In 1832 there were 1890 cases, 779 deaths: in 1849 the cases were 3360, and deaths 819. In 1832 the

mortality prevailed from the 11th of June to the 8th of September,—a period of 99 days: this year it continued from the 4th of July to the 8th of November,—127 days. In 1832 the epidemic carried off no less than 520 persons in the month of August; and its greatest intensity was from the 6th to the 15th of that month (ten days), wherein 211 deaths were registered. In this year September was the most fatal month, when 312 deaths were reported, and of these 160 occurred between the 15th and 24th,—also ten days. The greatest number of deaths occurred on the 21st of September, when 29 were recorded.

This, with the accompanying abstract of cases which I attended, concludes my first paper on the history of cholera in Plymouth, which I hope to resume again in a short time in the columns of your valuable journal.

Total number of patients visited by me at their houses:—

Cases of genuine cholera, with serous evacuations	50
Cases of choleric diarrhoea	43
Cases of ordinary diarrhoea	73
Cases of dysenteric diarrhoea	4

Total number of patients visited 170

Total number of deaths:—

Deaths from choleric diarrhoea, dysenteric diarrhoea, and ordinary diarrhoea	0
Deaths from cholera	16

Total number of deaths . . . 16

Of these 16, two were removed to and died in the hospital.

The following are the ages of each, and the stage of disease:—

1. John Bishop. Æt. 66. Not seen until collapsed. Cold, pulseless, and with choleric voice. Lived three days, and died of choleric fever. No urine secreted.
2. Philip Angel. Æt. 63. Seen in the first stage. Soon became collapsed; came out of collapse. Died of choleric fever. He lived a week. Urine free three days before death.
3. Eliza Augur. Æt. 26. Not seen until in the last stage of collapse. Was removed to the Cholera Hospital, and died within twenty-six hours. No urine secreted.
4. Mary Ann Lark. Æt. 40. Collapsed when first seen. Lived thirty-six hours. Passed no urine.
5. Eliza Lark. Æt. 9. Collapsed when first seen. Had had vomiting and purging for some hours, and been using quack remedies. Lived six hours after first seen. No urine.
6. Robert Hynes. Æt. 5. Collapsed when seen. Sunk rapidly.

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| 7. John Widdicomb. | Æt. 31. | Been purged for twenty-four hours, and had taken quack medicine. Collapsed when seen, and died within fourteen hours after. No urine. |
| 8. Henry Taylor. | Æt. 50. | Seen in the first stage of cholera. Rice-water purging and vomiting yielded to remedies. Evacuations became natural within twenty-four hours. Was persuaded to eat an egg, which brought back the symptoms, and he died in thirty-six hours. No urine. |
| 9. John Pateyjohn. | Æt. 64. | Collapsed when first seen by me. He had been seen during the night by the medical officer of the night. He was black instead of blue when I first saw him. No pulse. Icy cold. Died within fourteen hours. No urine. |
| 10. Clarissa Down. | Æt. 35. | Had been purging the whole day before seen. Bowels been moved fourteen or fifteen times, and the symptoms of collapse were coming on when she was first visited. No urine. |
| 11. Thomas Matthews. | Æt. 35. | Seen in first stage. He soon became collapsed. Was removed to the hospital, and came out of collapse, but died of disease of brain produced by a blow six months before. |
| 12. John Cocks. | Æt. 49. | Collapsed when first seen. Had diarrhoea the previous day. Went to his work in the morning, returned to breakfast, and was dead within eighteen hours. No urine. |
| 13. Jane Warn. | Æt. 22. | Seen in first stage. Became collapsed; came out of collapse; aborted with a dead child of eight months; and died at the end of a week of puerperal choleric fever, with sloughing sore throat and cornea. Urine free the last four days. |
| 14. George Winnacott. | Æt. 52. | Seen in first stage. Became collapsed; came out of it; and died of secondary fever. Urine free for one day. |
| 15. Henry Wyatt. | Æt. 10½. | Collapsed when seen. Lived thirty hours. No urine. |
| 16. Eliza Haynam. | Æt. 70. | Collapsed when seen. Lived twenty hours. No urine. Had diarrhoea the previous day. |

5, Mulgrave Place, Plymouth,
December 10, 1849.

CONGENITAL MALFORMATION. BY DR.
LEOPOLD, OF MEERAN, SCHÖNBURGH.

THE author was engaged in making the post-mortem examination of the body of a man who was deformed, and who had died with dropsy of all the three principal cavities. The body lay uncovered on a board: the thorax had been opened by the removal of the sternum; the upper part of the skull and the brain had been removed, and a block under the neck caused the face to look backwards, the neck being stretched to its greatest extent. At this moment the woman whose duty it was to lay out the body entered the room, being then about three months pregnant. It was the first occasion of her performing this office. She experienced a great shock on witnessing this unaccustomed spectacle; she nevertheless performed her duties, and thought no more of the occurrence, until about four months afterwards, when she was delivered of a dead

and premature female foetus. This was a hemicephalus. The frontal, parietal, and occipital bones rose only about an inch above the base of the cranium; the interval was filled up by a membranous bag, covered with integuments, and containing pulpy, sanguineous, cerebral substance, which had been partially extravasated during labour. The cervical portion of the vertebrae was wanting; the occipital bone was united to the first dorsal vertebra; the vertebral column was distorted, and the pelvic bones also. The larynx was prominent in the front of the body. The right hip was higher than the left, giving the right limb the appearance of being shorter than the left. There were present ascites, and œdema of the labia. In short, as the child's body lay on the table it closely resembled, in outward appearance, the partly dissected body which this woman had unexpectedly seen when three months pregnant.—*Casper's Wochenschrift*. X

REMARKABLE INSTANCE OF
SYMMETRICAL AND SYMPATHETIC
ACTION IN THE HUMAN BODY.

By E. H. SIEVEKING, M.D.

Physician to H.R.H. the Duke of Cambridge,
&c. &c.

THE following case, which has recently fallen under my observation, appears to me so marked an instance of the tendency to symmetrical action in the human body, that I think it deserves a special record. Nor is it the symmetrical action that it exhibits alone that attracts attention: it is singular also on account of the supplementary force displayed, or rather of the proclivity to re-establish even a morbid balance in the body to which the individual system has once become habituated. The reader will at once class the phenomenon under the general head of reflex action; but neither will this classification nor the doctrine of the symmetry of disease, as promulgated by Dr. W. Budd and other scientific inquirers, suffice to explain the occurrence. The sequence of the symptoms, as well as the absence of all evidence of morbid poison in the blood, militate against an implicit acceptance of either mode of explanation involved in the above theories. I apprehend that we must here, as in so many cases brought before the medical man, content ourselves with naming the fact, and leave the real exposition to another time, or to other inquirers.

Joseph Theobald, æt. 57, a cooper, of florid and healthy habit, now under my treatment for erysipelas of the left leg, brought on by exposure to cold, received a severe cut on the volar surface of the right hand, near the little finger, about twenty-five years ago, by a bottle breaking. The wound healed without any untoward symptom; but a gradual contraction of the little finger ensued, and, from its being bent upon the palm, it proved a serious inconvenience in the prosecution of his business, and he determined upon submitting to amputation. The finger was removed at the metacarpal joint, and the patient returned to his work in perfect health. Neither previously nor subsequently has he ever been subject to indisposition: his general health has always been excellent. Directly after the removal of the little finger of the right hand, however, a similar contraction commenced

in the little finger of the left hand: he knew of no cause; it had suffered no injury: it continued to contract until it assumed the exact position its fellow had previously held, and it has now for a series of years remained doubled up on the palm of the hand, incapable of the slightest motion, but possessing the same sensibility as the other fingers. These he is perfectly able to move, and they exhibit nothing abnormal; nor can any abnormality or irregularity be perceived about the muscles or tendons of the forearm.

Bentinck Street, Manchester Square,
Dec. 1849.

KING'S COLLEGE.—PROPOSED NEW
HOSPITAL.

A SPECIAL court of governors and proprietors of King's College was held last week, at the College, Somerset House, to consider the propriety of making a grant or loan towards the erection of a new hospital. The Bishop of London presided, and stated that, in consequence of the munificent offer of an anonymous individual of £5000 towards the hospital, the present meeting had been convened for the purpose of aiding this worthy object. The hospital was a most essential adjunct to the college, and as the college was increasing every year, the hospital ought to keep pace with it. One proprietor had entered his protest against any money being advanced for this purpose until the proprietors had received a dividend on their shares; but he (the Bishop) did not think they were restricted from doing anything that might be regarded as completing the college, and carrying out its efficiency. His lordship then read a letter from the Rev. Dr. Jelf, expressing his full approval of the proposal. W. Cotton, Esq., said he hoped the present opportunity would not be lost of securing an adequate endowment for the hospital. He had it on the highest authority that a hospital of 120 patients did not afford a sufficient means for the surgical education of the pupils in King's College. He moved, "That, in pursuance of the recommendation of the council, this court do sanction a grant of £5000, to be paid to the committee for the building and permanent endowment of King's College Hospital, on such condition as the council shall see fit." B. Webster, Esq., seconded the motion, which was put and agreed to unanimously. Mr. Alderman Copeland, M.P., in moving a vote of thanks to the Bishop for presiding, expressed his conviction of the necessity of a hospital on a more extended scale. Sir R. H. Inglis, M.P., seconded the resolution, which was agreed to.

ON THE
PRESENT STATE OF LUNACY, AND
OF LUNATIC ASYLUMS,

AND ON THE NATURE AND TREATMENT
OF MENTAL DERANGEMENT.

BY WILLIAM SMITH,

Member of the Association of Medical Officers of
Hospitals for the Insane; formerly Resident
Surgeon in the Lincoln Lunatic Asylum, and
subsequently at the General Hospital at Lin-
coln.

(Read before the Medico-Chirurgical Society
of Nottingham, December 7th, 1849.)

MR. PRESIDENT AND GENTLEMEN,—In presuming to address you this evening, I have selected for the subject of my remarks a topic well worthy of your most serious attention, and one which, however little advantage it may derive from my feeble powers of advocacy, will not, I feel assured, be dismissed hence without a patient hearing. I come before you to advocate the cause of a large class of your suffering fellow-creatures—a class once, it is to be feared, most grievously ill-treated, but still deserving, from its forlorn and defenceless condition, the warmest sympathy and compassion of every humane and feeling heart. The subject of mental derangement, view it in whatever light we may, has a strong claim upon the attention of every benevolent and rightly-constituted mind. The elegant Latin poet has said—

*"Pallida mors æquo pulsat pede pauperum tabernas
Regumque turres."*

And the observation applies equally to our present subject. But insanity is interesting to us in another point of view: I mean in reference to the fact of so many celebrated poets and other highly gifted individuals having suffered from its distressing and mind-annihilating influences. Amongst these I may mention Ariosto, Dante, Tasso, Alfieri, Cowper, Samuel Johnson, Collins, Smart the translator of Horace, Dean Swift, Nat. Lee, and many others. Nay, so much has this been the case with men of the greatest talent, that the truth of the maxim "*Nullum magnum ingenium sine dementia*" is now pretty fully established. The immortal Dryden, "the Great High Priest of all the nine," has declared—

*"Great wits are sure to madness near ally'd,
And thin partitions do their bounds divide."*

Before entering more immediately into my own views of insanity, I think it may not prove uninteresting to you to be made acquainted with a brief summary of the fearful amount of mental derangement now prevailing throughout England and Wales, and the almost incredible sums of money expended on behalf of the insane; and, as the most authentic document from whence to extract such information, I shall make some brief extracts from the "Further Report of the Commissioners in Lunacy to the Lord Chancellor, 1847." It would appear by that Report—"That there are in England and Wales alone, according even to the returns, more than twenty-three thousand persons of unsound mind. These returns, however, are notoriously imperfect, falling far short of the actual amount; and they do not, moreover, embrace the whole of a numerous class who are termed imbecile persons, having been so from birth, or become so from senility. Of the 23,000 referred to, nearly 5000 belong to the higher and middle classes of society, and about 18,800 are paupers. The whole are scattered about in various places: in private dwellings, in hospitals, in licensed houses, in workhouses, or in county asylums devoted solely or principally to the reception of the lunatic poor.

"The precise number of patients resident in the existing county asylums, hospitals, and licensed houses, on the 1st of January, 1847, will be seen to be as follows:—In the county asylums, hospitals, and licensed houses, subjected to our visitations, 3574 private patients, and 9652 paupers, making together 13,226. In Bethlem, and in the naval and military hospitals, not subjected to our visitations, 606. To these must be added paupers in Poor-law Unions and places under local Acts, 8986. Paupers in Gilbert's Unions, and other places not in Union, 176; also 307 of 542 single patients found lunatic by inquisition (235 being in licensed houses); other single patients in private houses, under the charge of persons receiving profit, about 130. The excess of pauper patients in workhouses, &c., estimated by the visiting Commissioners as at least one-third over the number returned by parish officers, 3053. Criminals in

gaols, 32;—making a grand total of 26,516.

"The aggregate number of the insane and imbecile, together with their various committees, visitors, medical officers, attendants, and servants, cannot be fairly estimated at less than 30,000 persons.

"The several establishments appropriated solely and mainly to the use of lunatic patients appear to be—county asylums, hospitals, and licensed houses, 177; separate establishments for single patients, 437.

"To these must be added Union and Parish workhouses in England and Wales (596 in number) in which the insane and imbecile poor reside in various numbers, extending from one to about 100 in each workhouse.

"The value of the various private asylums in this country, 142 in number (some being very large and expensive establishments), we have no means of calculating, but it is assuredly of very great amount. The sums expended in building, furnishing, and altering nineteen of the county asylums (according to the return made to Parliament in 1846), amounted nearly to £1,000,000: this sum did not include the expense of three county asylums since erected, nor thirteen public hospitals receiving lunatics, of which Bethlem Hospital alone cost £120,000, and St. Luke's £55,000.

"The expense of these last-mentioned sixteen public establishments, when in a complete state for the admission of patients, has not probably been much less than that of the nineteen county asylums above mentioned.

"No materials exist for calculating the value of the property possessed by lunatics, and we are unable to state the precise yearly sum expended on their behalf; but an approximation to the amount may be obtained by referring to the incomes of some, and examining the maintenance of others. According to the Parliamentary Return of the 20th June, 1839, there were then 494 found lunatic under inquisition, whose incomes altogether amounted to the yearly sum of £277,991. 13s. 3d.; and on the 1st of January, 1847, there were 542 such patients, the aggregate amount of whose yearly income was about £280,000, almost the whole of which is expended for the benefit of their families. The number of pauper patients con-

ascertained, and the average rate of payment for each, as well as the average cost of the pauper patients in workhouses, may be estimated, without deviating very widely from the actual amount.

"On a rough estimate it may be stated that the aggregate amount of money expended every year for the maintenance of lunatic patients, or administered on their behalf, exceeds £750,000, viz.—

"1st. The cost of 9652 paupers in asylums, estimated at an average of eight shillings per week each, £200,761. 12s.

"2d. Do. of 8986 paupers in Union workhouses, &c., and 173 in parishes not in Union (together 9159), estimated at an average of three shillings per week each, £71,440. 4s.

"3d. Do. of excess of 3053 paupers over the number returned by parish officers, £23,813. 8s.

"4th. Do. of 3574 private patients in asylums, &c., at an average of twenty shillings per week each (deducting the cost of 235, part of 542 found lunatic by inquisition), £173,628.

"5th. Income of 542 patients found lunatic by inquisition, £280,000.

"6th. Cost of 606 patients in Bethlem, and the naval and military hospitals, estimated at ten shillings per week each, £15,756.

"7th. Cost of 120 other single private patients taken charge of in separate houses, at £100 per annum each, £12,000.

"8th. 32 Criminals in gaols, estimated at three shillings per week each, £249. 12s.;—making a grand total of £777,648. 10s."

We will now, gentlemen, enter upon the consideration of the nature and treatment of mental derangement. The subject is one of vast magnitude, and embraces an infinite variety of structures and organs: the nervous system; the vascular system; the digestive, assimilative, and reproductive apparatus; and, in fact, every important organ in the human body (in addition to the brain), heart, lungs, stomach, uterus, &c., may individually, or several of them collectively, either directly or through the medium of nervous sympathy, give rise to and maintain irritation or disturbance of the sensorial mind. To view mental de-

rangement as a disease of the brain exclusively, and unconnected with other organs or portions of the human frame, and to treat it as such, is, to my thinking, both unsound and unphilosophical. I do not mean to deny that the brain is affected in every case of mental derangement; but what I complain of is this, that practitioners too often regard insanity as an isolated condition, and attempt to treat it by specific remedies, such as opium, sedatives, &c., without paying any attention to other organs which may have been primarily and principally affected, and through which the brain itself, or its functions, was only secondarily affected. The experienced Dr. Mann Burrows (whose instructive writings should form a part of the library of every practitioner professing to treat mental disorders) has some excellent remarks (in his 5th Commentary) upon the connection of the nervous and vascular systems with the phenomena of mental derangement. He says—"Most nosologists class insanity among the neuroses; and hence it has been popularly received as a disease exclusively of the nerves. Let us examine if there be not ground to assume that the disorders of the sanguiferous system have not as great, or greater, influence in originating insanity than those of the nervous system. Perfect health cannot exist unless the balance between the nervous and vascular systems be exactly preserved. While they act in unison every function is regular; when either preponderates, disease commences. Sometimes the corporeal functions only are disturbed; sometimes the mental functions are implicated in those of the body, and this constitutes insanity. But the nervous and vascular systems in every case of mental derangement seem in opposition, sometimes actively, sometimes passively so; but during a paroxysm of mania they are always in a state of antagonism. The preponderance of either may, as we have seen, be determined both by moral and physical causes. Neither the vascular nor the nervous system can receive an insulated impression, for whether the irritation, which an impression produces, be applied to the sanguiferous or lymphatic vessels, or the branches of nerves in connexion with them, both systems participate, and equally suffer. Thus we find alterations, or even disorganization of structure, result from

long-continued nervous complaints; and at length the parts so affected proceed to a state of erythsm or sub-inflammation, and finally to the highest degree of excitement, or real inflammation." Now, although these observations may be strictly correct as regards certain nervous diseases affecting other parts of the human frame, yet I cannot, in accordance with my observation and experience of insanity, admit the truth of its being, under any circumstances whatever, an inflammatory affection of the encephalon; at all events, experience clearly proves that (even if inflammatory) it will not bear depletion; nay, further, Dr. Burrows himself says, page 85 of the Commentaries—"That insanity is the effect of cerebral inflammation, I am persuaded is an error as dangerous as it is common. Nothing is more clear, in my opinion, than that the inflammatory and maniacal actions are totally distinct." During the last nine years I have seen a large amount of insanity both in public lunatic hospitals and in private practice, and likewise carried on an extensive correspondence with many of the most experienced physicians connected with institutions for the insane both in England and Scotland; and no subject appears to me of more paramount importance, in the whole range of psychological medicine, than this, that the practitioner should entertain clear conceptions of the essence or nature of insanity, and especially of its non-inflammatory character. Is there anything unreasonable in this? Do we not every one of us act upon this very principle in the ordinary treatment of disease? Are we called to a person suffering pain in the side or abdomen, do we not make it our primary object to ascertain whether it be the pain of inflammation (as of pleuritis, or peritonitis) or merely that of irritation? and does not our diagnosis on this point mainly influence the subsequent treatment? Having distinctly stated my own opinion as to the non-inflammatory character of mental derangement, let me now attempt an explanation of what it really is. Without taking upon myself to say decisively (at this point of our inquiry) whether insanity be a blood disease, like epilepsy, scrofula, gout, syphilis, &c.—whether it be seated in the nervous system exclusively, or in the vascular system,—or whether it be not common to both—this much I am pre-

pared to maintain—that it is essentially a disease of accumulated excitability, “an excess or superfluity of the *vis nervosa*” (call it what you please). I look upon a maniacal paroxysm merely as an effort set up by Nature to throw off this superfluous nervous energy; and believing this to be the case, I very much doubt whether insanity ought not to be ranked with convulsive or spasmodic diseases, such as epilepsy, chorea, &c. It is highly probable that in nine cases out of ten of mental derangement, the functions only of the brain are affected at the onset; there is no real organic disease. Taking this view of the case, we can clearly understand the great relative curability of insanity (in its incipient stages) as compared with other diseases; but neglect the disease at this stage, or, what is still worse, reduce the *vis conservatrix nature* by copious blood-letting, powerful drastic purgatives, low diet, and the liberal employment of the strait waistcoat, iron hobbles, &c., and you have an incurable disease set up, or the wretched patient is reduced to dementia or absolute futuity!

In order to exhibit the close analogy and natural alliance existing between mental derangement (in all its varied forms) and convulsive disorders, such as epilepsy, chorea, &c., I shall take leave to quote some extracts from a paper, by Dr. Wm. Bush, of the Sandywell Park Asylum, near Cheltenham, entitled, “Juvenile Delinquency and Degeneracy in the Upper Classes of Society,” and contained in the 7th number of the *Psychological Journal*. He remarks:—“Now all this irregular action may be considered as ‘perverted energy,’ a kind of moral epilepsy, as an instance of the convulsive temperament, exhibiting itself in that part of the nervous system which presides over the animal energies and moral feelings.

“Bearing in mind that the same morbid condition of the nervous system prevails in every form of convulsive disease, that the varieties of diseases are only modifications of the intensity of that condition, and that the differences of symptoms are referable to the portions of that system most energetically attacked, we have a simple explanation of all the phenomena attending them. Ordinary epilepsy is the most intense form of this class of diseases, for in it the unconsciousness of mind, the convulsion of the muscles, and the suspen-

sion of the will—the grand features of all these nervous affections—are the most complete.

“Whenever those peculiar phenomena, of which the nervous system appears to be the source, whether they be electrical, or the vital principle itself, or some ethereal essence; whenever those vital manifestations, which all physiologists attribute to the nervous system, under the name of ‘*vis nervosa*,’ accumulate in greater quantity than is required for the use of the individual, they exhibit themselves in diseased action: in other words, Nature sets to work to dispose of their superfluity as useless and detrimental.

“It may be here remarked, that this excessive activity is no more an evidence of tone in the nervous system than it is in the vascular, for we may with as much justice argue, that the quickened pulse in fever is an indication of increased vital power, as to say that excessive nervous energy should be attended with corresponding power in the character of the individual. It is that occult cause which supplies more nervous stimulus than is required: it is this which constitutes the disease, and we see, therefore, that activity or intensity is no test of power. The familiar instance of precocious intellect observable in some children, which springing up quickly from a weak root, soon shows its origin in its speedy decay, may be adduced in support of this opinion.

“We have, then, it would seem, some clue to the origin of all convulsive affections, but we are for the most part ignorant why any particular medium should be selected for the escape of this superfluity. In a few instances we may discover some explanation for the choice, as in the case before us, where it would appear that that portion of the nervous system most completely developed is selected as the readiest and most appropriate channel for the escape of superfluous energy. In youths, those portions of the nervous system which preside over the animal and moral feelings are more developed and more active than the intellectual, and it is accordingly through such channels that any morbid exuberance of nervous energy displays itself, as in ‘moral epilepsy;’ but in the adult, where the intellectual development prevails, we find the intellect (partially) as well as the morals implicated, as in ‘moral insanity.’ The

judgment (discretion) must be impaired to constitute moral insanity; but in youth, there being little or no judgment to impair, we ascribe its wild impulses to an epileptic condition of that part of the nervous system which presides over the animal emotions. That the preceding explanation has some foundation in nature, we have only to refer to a disease characterized by an inordinate amount of blood in the vessels, called 'phlogosis,' in which we see Nature attempt a similar proceeding for getting rid of a superfluity of blood, by setting up that tumultuous action of the heart and arteries which seeks relief in hæmorrhage.

"Consistent with this view, however paradoxical it may seem, we witness in the fearful struggles of an epileptic the attempt of Nature to cure the disease, or, at least, to mitigate the effects of that morbid condition of the nerves which constitutes the disease; and this opinion is so far corroborated by the fact of the temporary relief experienced by the patient after a fit. It would appear, upon reflection, assuming the morbid cause to exist in the intervals of repose, as well as in the paroxysms (as it must do, not being removed), to be a beneficial provision of Nature, that the morbid irritability of the nerves should, in epilepsy, be discharged by one great explosion, during the unconsciousness of the patient, than escape by frequent, though slighter, shocks, to his constant and conscious distress. We can no more explain how it is that the phenomena of convulsions should display themselves through this or that set of nerves, than we can demonstrate the morbid condition which produces them. It is inexplicable what that change can be, which in a state of health stimulates a youth to the exercise of his muscles in active games, or in disease contorts them with convulsions. We can no more tell the cause of that steady, even flow of nervous energy, which in health produces so many agreeable sensations, than how its changed or interrupted course excites convulsive passions; nor how it happens that the same nervous stimulus should in one state urge on to noble and heroic deeds, and in another impel us blindfold to some reckless folly."

Now it appears to me that these observations are valuable in a twofold point of view:—1st. As tending to ex-

plain the *modus operandi* of all spasmodic or convulsive disease, for, as Dr. Bush truly remarks, epilepsy must be looked upon as the grand type of all convulsive diseases; and 2d, as calculated to throw considerable light upon some of the more intricate phenomena of mental disorders; and more especially to corroborate the important fact of the close analogy and natural affinity existing between insanity (in all its varied forms) and the whole class of convulsive or spasmodic diseases. Dr. Mann Burrows, at page 113 of his Commentaries, has the following observations:—"We find in a very large class of diseases, such as all the neuralgia, tetanus, spasms of various kinds, asthma, chorea, hysteria, epilepsy, cephalæa, vertigo, syncope, convulsions, carus, asphyxia, catalepsy, lethargus, apoplexy, paralysis, every species of mania, together with all febrile diseases, whether in the simple or graver form, or even in acute inflammation,—as phrenitis—that a mutual connection exists; and there are few of these in which the intellectual function is not primarily or secondarily affected. In most, likewise, the sanguiferous system seems as much implicated as the nervous."

I am aware that the suggestion which I have thrown out of mental derangement being looked upon as a convulsive or spasmodic disease will be strongly opposed on the ground that the intellectual faculties are located, or have their origin in the grey or cortical portion of the brain; whilst all, or most of the spasmodic or convulsive diseases, depend upon irritation or a diseased condition "of the true spinal or excitomotor system of Dr. Marshall Hall. But I would ask, are these premises distinctly proven? and do we find, at the bedsides of our patients, in actual disease, that these critical lines of demarcation between the cerebral and spinal, or between the nervous and vascular systems, are rigidly preserved? My observation of disease has proved the contrary to be the fact. It is perhaps absolutely necessary for the right understanding of the anatomy and physiology of the nervous system that these arbitrary distinctions should be made; but when we come to the phenomena of disease, I apprehend we shall find an intimate sympathy connecting together the various parts of the cerebral and spinal, the nervous and vascular sys-

tems. If any of you will take the trouble to watch attentively the next *exquisite* case of hysteria you meet with, and accurately compare the symptoms with a moderate case of mania, I think you will agree with me that the difference is more in degree than in kind: in both diseases you have perverted nervous energy, and a disturbance of the natural equilibrium which ought to exist between the nervous and vascular systems. But let it not be concluded from this that I attribute chorea, hysteria, and that class of diseases, exclusively to the nerves; by no means; the vascular system is as much, often more, implicated in these disorders than the nervous system: hence it happens that the cold shower-bath, iron, exercise in pure air, plain nutritious diet, &c., cure these disorders, which they do by increasing the red particles of the blood, and bracing up the nervous, vascular, and assimilative systems. The plain truth is, we must deal with the human frame and its disorders as we would with a refractory watch—look to every portion of the fabric, for as a small screw displaced in one part of the delicate machinery of the watch will disturb the mechanism of the whole, so one portion of the human frame being disordered will inevitably destroy the healthy equilibrium of the whole. What says that sagacious physician and most accurate observer of disease, Dr. P. M. Latham, in the preface to his admirable *Lectures on Diseases of the heart*?—"The study of our times has been chiefly to specialise and localise disease, and it has had very useful results. But it has had a tendency to narrow our views, and to cripple our practice, by setting up as many several pathologies within the body as there are several organs. Yet no sooner do diseases of separate parts come to be treated than they begin to claim their place in a common pathology. We cannot reach them, and apply our remedies directly to them, in the isolated spots wherein we find them; but if they are to be reached and treated at all, it must be through the vascular system, or through the nervous system, or through the digestive and assimilative system. For these are the common agents of life and increase, both healthy and unhealthy, and the common channels both of food and medicine." Are not these remarks applicable to insanity, as well as every other disease affecting

the human frame? Why, then, should mental disorders be set apart (as an unclean thing) from all others, in specific works on the subject, as though the brain were wholly unconnected with other parts of the human frame, and its disorders beyond the pale of general pathology and therapeutics?

But to return to the analogy subsisting between mental disorder and the class of neuroses embracing epilepsy, chorea, hysteria, &c.; would any of us, on being called to an hysterical female, or an epileptic male, take out our lancet, and abstract twenty or thirty ounces of blood from the arm, perhaps order, in addition, cupping or leeches to the temples, or nape of the neck, powerful drastic purgatives, and finally sicken our patient with repeated doses of tartar emetic? You doubtless smile at the absurdity of my question, and yet such is the practice adopted by too many practitioners, under the mistaken idea of cutting short the maniacal paroxysm: but general depletion, low diet, and harsh coercive measures, have been found, by bitter experience (too dearly bought), to exasperate in place of allaying mental excitement. I am not supposing a case, my experience of actual disease having afforded me too many illustrations. The particulars of one case, which first directed my attention to the subject, I will briefly narrate. Very soon after my official appointment at the Lincoln Asylum, a male pauper, named B. V., was admitted in a state of profound physical exhaustion, but very restless and incoherent withal; he had colliquative diarrhoea, and the body was covered with small sores, showing the languid state of the circulation: on strict inquiry of some friends who came to visit him, I found that he had had violent maniacal paroxysms, for which the parish surgeon had bled him largely on two separate occasions, besides employing other lowering remedies; he rapidly sank after his admission, notwithstanding the liberal exhibition of powerful astringents, nutritious diet, wine, brandy, &c., and only survived his admission thirty-two days. This case made a deep impression upon my mind, and I may remark, that although more than seven years of active professional life have elapsed since that occurrence, I have never, in a single instance, prescribed blood-letting, general or local, for any of the numerous cases of mental

derangement which a public lunatic hospital or private practice have placed under my charge. I consider insanity, however violent may be the paroxysms, or incessant the mobility, as essentially an asthenic disease—a disease of debility; and should as soon thinking of viewing the rapid pulse and raving delirium of fever as proofs of increased vital power, as imagine that the noisy vociferations, great muscular activity, and intense mobility of lunatics, indicated tone of the nervous system. I have strong grounds for the belief that there are at the present moment very little short of ten thousand incurable lunatics in England and Wales! and out of this number I conscientiously believe that a larger proportion has been reduced to that hopeless and pitiable condition by the heroic employment of the lancet, and other depletive measures employed at the onset of the attack, than by leaving the malady to the unassisted efforts of nature—and, in fact, letting the disease run its own course. This may appear a very startling and heterodox opinion to those who have not witnessed the management of a public lunatic hospital, but I am strongly inclined to think that many physicians well versed in psychological practice could be found who entertain very similar opinions. If the paroxysm of mania, like the epileptic seizure, be in reality an effort of nature to throw off the materies morbi, and discharge the pent up nervous irritability through the medium of the muscular system, upon what rational or philosophical principle do those persons act who reduce the *vis conservatrix naturæ*, and sap the vital powers by abstracting blood—the *pabulum vitæ*?

Belper, South Derbyshire,
December, 1849.

[To be continued.]

THE LONDON DISPENSARY.

THIS old and useful charity, during the year that has just closed, relieved no less than 2244 persons who were admitted, only 68 of whom died. This charity likewise relieves poor persons at their own homes in one of the most destitute parts of metropolis, viz. Spitalfields. The funds of the charity require replenishing. The Clothworkers' Company have given a donation of £10. 10s., and some of the other larger companies, we believe, are about to follow their example.

MEDICAL GAZETTE.

FRIDAY, JANUARY 11, 1850.

IN a recent number we directed the attention of our readers to the statistics of *Phthisis* derived from the observation of a large number of cases treated at the Hospital for Consumption. Our remarks were then limited to the influence of sex, age, and hereditary predisposition in the production of the disease. We propose now to consider how far the Report before us has added to our knowledge of the *diagnosis* and *treatment* of phthisis.

The reporters justly remark that it is an object of the first importance to be able to detect the existence of phthisis at its very commencement, inasmuch as it is well known that there is a stage in its progress after which cure must be considered almost hopeless. In addition to the physical signs obtained by auscultation and percussion, which have often proved equivocal, the employment of the *Spirometer* has been suggested as a valuable aid to diagnosis. This instrument, by determining the capacity of the lungs for air, serves to indicate to what extent the organs may be obstructed by tubercular or other deposits. The greater number of cases in which the spirometer was employed were examined under the superintendence of the inventor, Dr. Hutchinson. The results were as follows:—Out of 241 cases of phthisis in the stage before softening, the mean healthy vital capacity* of the lungs being 223 cubic inches, there was a diminution amount-

* By the term "vital capacity" is implied the quantity of air which a person can *expire* after a deep inspiration. An allowance must be made for the effects of nervousness or inexperience in the use of the instrument at the first trials, or very erroneous inferences may be drawn. It is also well known that the lungs may have their vital capacity reduced from other diseases which affect the thoracic or abdominal viscera.

ing to 74 cubic inches; and in 174 cases in the stage after softening, the diminution amounted to 116 cubic inches. It is remarked, with respect to the use of this instrument in diagnosis, that—"In various individuals in whom there were circumstances calculated to excite some suspicion of the existence of disease, the favourable indications furnished by the spirometer have enabled the medical officers to pronounce an encouraging opinion, which, in the sequel, has been confirmed."

A short summary is given of the observations connected with the occurrence of *Hæmoptysis* as a symptom accompanying phthisis. It existed in 1381 cases, of whom 910 were males and 471 females. It occurred in both sexes in nearly an equal number of cases, and most commonly in the *first* period of the disease. There is a slight difference in the sexes as to the *age* at which this symptom is most frequently observed. Thus—

"In phthisical females, hæmoptysis most frequently occurred between the ages of 5 and 25, viz., in the ratio of 72 per cent.: the period of its most frequent occurrence in males is between the ages of 25 and 45; for out of 409 cases of phthisis within those two decennial periods, 290 were attended with hæmoptysis, being in the ratio of 71 per cent.; whereas in the same (male) sex, under the age of 25, it occurred in the ratio of only 57 per cent., and between the ages of 45 and 65 the ratio is even under 50 per cent."

Another point of interest to the medical practitioner relates to the *duration* of the disease. This was recorded in 215 cases, and the results are contained in the subjoined extract:—

"Phthisis rarely proves fatal in less than three months, only one case being recorded as having been fatal within that period. The disease existed in 22 of the 215 cases for a period of three and six months; of these 11½ per cent. were males, and more than 7½ per cent. were

In 36 cases the disease lasted from six to nine months; of these, 19 per cent. were men, and 12 per cent. women. The disease existed for a period of from nine to twelve months in 30 cases, of whom about 15 per cent. were males, and nearly 12 per cent. females. The half-yearly periods, extending in the table from twelve months to four years, contain in each period, with one trifling exception, a decreasing number of cases; for whilst we observe that nearly 17 per cent. of the cases have a duration of from six to nine months, not 2 per cent. are found in the period from three and a-half years to four. Fourteen persons, that is 6½ per cent., lived for periods above four years. Considerably more than half the entire number of cases were fatal within a period of eighteen months, the numbers being 123 to 78. In reference to the influence of sex, we observe a remarkable fact, viz. that the disease is *more rapidly fatal amongst males than females*: thus, of the 123 cases which terminated within eighteen months, 89, or 60·5 per cent., were males; whilst only 34, or 50 per cent., were females. After a period of eighteen months the duration is reversed: of 78 cases, 47, or 31·9 per cent., were males, whilst 31, or 45·5 per cent., were females."

The most important section of the Report is that which has a practical bearing on *treatment*. We here give the results observed in the treatment of the in-patients, to whom every comfort is afforded, and who live in an atmosphere which is maintained at the uniform temperature of nearly 65°, at all seasons of the year. This arrangement is found, with a few exceptions, to be productive of the greatest benefit: the cough becomes less frequent, and the expectoration diminishes.

"Nearly one-half of the patients, both males and females, who seek relief in the first stage of the disease, obtain it to a limited extent. In about 40 per cent. of the cases the material benefit implied in the term *much relieved*, (the removal of the principal symptoms) is *undoubtedly* obtained, the sexes being in nearly equal proportions. In 12 per cent. of the cases, lying in the first stage of the disease, the progress appears to have

been, for the time at least, if not completely, arrested; whilst in less than 7 per cent. of the females was the like result obtained. In 4 per cent. of the males, and in $4\frac{1}{2}$ per cent. of the females, the disease resisted treatment in this stage, and progressed rapidly to a fatal termination. In one case death occurred in this the first stage of the disease.

In the second stage of the disease we find that about 60 per cent. of the males, and about 53 per cent. of the females, have the distressing symptoms under which they suffer more or less relieved; in about 23 per cent. of the first-mentioned sex, and 33 per cent. of the latter, a more material degree of benefit is conferred. The very small number of cases arrested in this stage is quite in accordance with what might have been *a priori* expected. When the softening process, characteristic of this stage of pulmonary consumption, has commenced, the formation of cavities is an almost inevitable result; the number of females slightly exceeds that of males, the converse of what occurs in the preceding stage: the numbers, however, are too few to justify any positive deductions as to the apparent influence of sex. The disease proceeded unarrested in about 13 per cent. of the males. We can only account for no females appearing under this head by supposing that the disease had either been relieved or passed into the third stage before they came under observation; one death occurred in this stage in fifteen females.

"In the third stage we find that in about 25 per cent. of both sexes the symptoms were mitigated by treatment; 16 per cent. of males, and 12 per cent. of females, in addition to the preceding, were very much benefited, and in a little more than 3 per cent. of males, and nearly 4 per cent. of females, the progress of the disease was arrested. In about 20 per cent. of males, and 25 per cent. of females, the disease progressed unchecked whilst under observation. In 33 per cent. of each sex who applied in this stage of the disease, death occurred. Viewing these results collectively, without reference to stage or sex, we find that benefit is conferred in 36 per cent. of the cases; material relief in nearly 25 per cent.; in nearly 6 per cent. the disease is arrested: and here it should be borne in mind that

the delay which occurs in the admission of patients, in consequence of the want of accommodation for the numbers who apply, allows the disease to advance, and thus renders the treatment more difficult, and less successful than it would otherwise have been. Still, under such unfavourable circumstances, it is satisfactory to find that, in nearly 6 per cent. of the cases of this disease, considered by many to be beyond the reach of treatment, a result has been obtained, which a desire not to speak too confidently alone forbids us to designate as cured. In nearly 15 per cent. the disease was unchecked by treatment, and was fatal in the hospital in $18\frac{1}{2}$ per cent. of the cases admitted."

The only remedies of which it has been considered necessary to make an especial notice are—naphtha and cod-liver oil. With regard to the effects of naphtha, the report is decidedly unfavourable.

"*Naphtha*.—Amongst the medicines alleged to have curative powers, a fair trial has been given to pyro-acetic spirit or naphtha. There are some complications of phthisis, such as bronchitis, attended with profuse secretion, in which it has appeared occasionally to exert a favourable influence—moderating the secretion, improving the appetite, and increasing the strength; but it was not observed to possess any specific power of suspending or ameliorating tubercular disease of the lungs, and in many cases it acted very injuriously."

On the other hand, the effects of *Cod-liver Oil* were found to be highly beneficial. It was administered in 542 cases.

"Of these 542 cases 293 were in the first stage of the disease, and 249 in the second and third, or those stages subsequent to softening; of those in the first stage, 190 were males, and 103 were females. Applying to these cases the terms already used, it will be observed that 72 per cent. of the males, and 62 per cent. of the females, had their symptoms materially improved; in nearly 18 per cent. of the males, and in 28 per cent. of the females, the disease was arrested; in 10 per cent. of the males, and in nearly 10 per cent. of the females, the disease progressed unchecked. Of the 249 patients in the second stage of the

disease, 139 were males, and 110 females. In 53 per cent. of the males, the symptoms were materially improved, and in nearly 61 per cent. of the females. In a little more than 14 per cent. of the males, and in nearly 14 per cent. of the females, the disease was arrested. In a little more than 32 per cent. of the males, and in 25½ per cent. of the females, the disease was not arrested. Viewing these results collectively, we find in about 63 per cent. the symptoms improved; in 18 per cent. the disease arrested; and in 19 per cent. it went on unchecked. When it is recollected that of the whole number treated at this hospital, the disease was arrested in only 5 per cent., the value of this remedy, under the use of which the disease appears to have been arrested in 18 per cent. of the cases, must be considered very great.

"Different qualities of oil have been tried, without exhibiting any marked difference in their remedial effects; but the offensiveness of some of the darker kinds renders their general use impracticable. The oil now used is straw-coloured, transparent, and free from offensive smell. Patients in general take it without repugnance. The dose at first is 1 drachm three times a-day for an adult; but it is gradually increased in some few cases to 1½ oz. for a dose. It is usually administered in car phor-water, any aromatic water, bitter infusions, milk, or any other agreeable fluid. When there is great irritability of stomach it has been given in mucilage of gum with a few drops of hydrocyanic acid. In cases where there existed great anæmia and debility, and in those where the effect of the oil seemed slight, preparations of quinine and iron, especially the iodide, have been conjoined with advantage. It has appeared advantageous to intermit its use for a few days when nausea and feverishness, from whatever cause produced, are present. In certain cases the use of the oil has been continued during the existence of slight hæmoptysis, without producing any injurious results.

* * * * *

"From these facts, and a more extended experience since the period at which this report terminates, no other conclusion can be drawn than that cod liver oil possesses the property of controlling the symptoms of pulmonary consumption, if not of arresting the dis-

ease, to a greater extent than any other agent hitherto tried."

This testimony is highly in favour of the employment of Cod-liver oil as a remedial agent in phthisis. The report states that other animal oils and vegetable oils have been tried with a view of ascertaining how far their operation resembled that of Cod-liver oil. The trials hitherto made have not been as yet sufficiently numerous to justify any decided conclusions. In a future report it would be desirable to have some definite information on this subject, since many English and French practitioners are now employing seal and other fish-oils as substitutes for that which is extracted from the liver of the Cod, and it is said with equal benefit. Of one fact there can be but little doubt, that much of the cod-liver oil which is sold is extensively adulterated: hence practitioners should be careful in procuring it from respectable dealers upon whom they can rely.

We here bring to a close our remarks on this statistical report, which, in our opinion, one of the most trustworthy records of phthisis that has hitherto been published. It is alike creditable to the Governors of the Institution and to the Medical officers by whom it has been prepared.*

A FEW years since a pamphlet was published by a London physician strongly recommending the employment of unfermented in preference to baker's bread†. The unfermented bread is made, as our readers are no doubt aware, by mixing bicarbonate of soda with the flour, and subsequently knead-

* We are informed that the Report has been published, not merely to benefit medical science, but with the charitable object of adding to the funds of the Institution. The proceeds of the sale are to be given to the Hospital for this purpose.

† For a notice of this essay see MEDICAL MAG. 264.

ing it with diluted muriatic acid. While it possesses no nutritive advantage over bread made by common fermentation, it is liable to produce all the effects of poisoning, owing to the commercial muriatic acid frequently containing arsenic. We elsewhere* insert an extract from a letter to a contemporary journal, which shows that the unfermented process cannot be safely resorted to, except by those who are sufficient adepts in chemistry to determine the purity of the muriatic acid employed.

IN the present number we bring to a close the course of lectures on surgery by Mr. BRANSBY COOPER. These lectures have been published regularly in alternate numbers of the journal since April 1847, and they are contained in the last six volumes of the *MEDICAL GAZETTE*. For the information of our readers we may here state that it is Mr. B. Cooper's intention to collect and publish his lectures in one volume, on the same plan as that adopted in Dr. Watson's *Practice of Physic*.

FORENSIC MEDICINE.

MM. CHEVALLIER, Lasseur, and Lassaigue, have determined, by experimenting upon animal substances placed in arseniferous earth, that the very minute proportion of arsenic sometimes met with in certain soils cannot be transmitted to organic matters buried in it; that the organic substances undergo putrefaction without the absorption of arsenic from the soil; and that the contrary opinion is erroneous, and destitute of foundation.—*Journal de Chimie Médicale*, Mai 1849.

. The June number of the above journal contains a letter from M. Orfila, in which he states that he had, in the year 1847, arrived at the same conclusions, from a much more extensive series of experiments, and that his conclusions were published in his treatise on legal medicine. X

* See page 85.

Reviews.

Guy's Hospital Reports. Second series. October 1849. Vol. VI. Part II. 8vo. pp. 387. London: Highley.

WE gladly embrace another opportunity of directing our readers' attention to this truly practical journal. In the volume before us they will find a large amount of instruction which they may turn to good account in the treatment of disease. In support of our statement, we shall enumerate the several articles, seriatim, and present the leading features of each.

1. *Cases selected from the Ward Books of Petersham House, with remarks.* By Dr. LEVER.

These consist, first, of ten cases of uterine polypi, "selected for the purpose of explaining their nature, origin, and seat." The recital of these cases is followed by a few concise and judicious observations on the treatment of these morbid growths. The instructive details of five cases of pelvic cellulitis follow. These cases, which are usually obscure in their commencement, and are often entirely overlooked or mistaken, Dr. Lever attributes in most instances to a want of due proportion between the head of the fœtus and the pelvis. The succeeding cases and observations may also be studied with advantage by obstetric students. They include examples of ovarian dropsy, aphthous inflammation of the vagina, abnormal formation, fibrous tumor of the labium, cicatrices following delivery, pregnancy with chorea, pregnancy malingered and denied. The cases of pregnancy with chorea are especially worthy of notice, from the importance which is often attached to the complication, and the certainty of the prognosis which may be given.

2. *A case of Ptoxis.* By JOHN F. FRANCE.

"The substantive proofs that this affection was hysterical are based on its history, its symptoms, regular and anomalous, and the process of cure." This case forms an interesting narrative, which will repay perusal.

3. *A Contribution to the Anatomy of Double Monsters.* By ALFRED POLAND.

This contribution consists of the dis-

section of two double festoons, united by their anterior surfaces. It would be impossible to give our readers a fair abstract of this paper. We must commend its study to those who feel an interest in this department of anatomy, assuring them that the descriptions of the malformations are sufficiently minute and exact, and are also accompanied with several lithographic illustrations, which almost supersede the text.

4. Considerations connected with the Pathology and Surgery of Urinary Concretions. By B. B. COOPER, F.R.S.

One of the chief features in the author's views as herein propounded is the part which he assigns to carbonic acid in the pathology of urinary concretions. We quote the following from Mr. Cooper's remarks on the subject. Speaking of deposition taking place upon a foreign body or nucleus in the bladder, the author observes—

"It is well known that any solid body having an uneven surface, and offering points and asperities, will cause the rapid evolution of carbonic acid from any fluid impregnated with that gas: thus, for example, if into soda-water, in which the effervescence from the spontaneous liberation of the gas has completely ceased, we throw a few cuttings of metal, or even bread or wood, gas will again begin to be given off from the fluid. If, then, we consider (and I think it scarcely admits of doubt) that carbonic acid is, at least in some measure, the solvent for the earthy constituents of the urine, it will at once be seen that the presence of a foreign body of an irregular figure may cause the gradual but continuous discharge of the carbonic acid from the urine; and as the liberation of that gas takes place from the points presented by the foreign substance, it follows that the earthy matter thus deprived of its solvent is precipitated upon the body." (p. 270.)

The paper throughout shows a considerable acquaintance with the chemistry of the urine, and conveys instruction on many points which we need not here dwell upon, as they will doubtless be found by our readers in the valuable surgical lectures of Mr. Cooper, concluded in the present number of this journal. We must add that a coloured lithographic plate accurately exhibits the aspects of several calculi to which Mr. Cooper refers. These drawings are only equalled by those which accompany the catalogue of the calculi in the museum of the

College of Surgeons, by Mr. Thomas Taylor.

5. Mr. Cock's Select Cases of Hernia will be found full of interest. The value of opium administered after the operation, and of a careful abstinence during the first few days from the use of purgative medicines, were enforced by Mr. Cock in the last number of the Guy's Reports, and are here further demonstrated. The author's remarks on the division of the stricture external to the sac may be profitably consulted by many.

6. On Mania co-existing with Uterine Disease. By Dr. LEVER.

The author relates two cases which demonstrate that mania in the female may depend on morbid conditions of the sexual organs, and that treatment must therefore be directed to these organs.

7. Description of some of the Tumors removed from the Breast, and preserved in the Museum of Guy's Hospital. By Mr. BIRKETT.

These descriptions are profusely illustrated by well-executed lithographic plates. None of these tumors have any relationship to carcinoma, but for the most part consist of morbid conditions of the tubes, or of the fascia of the mammary glands, or of a false kind of hypertrophy of the gland.

The author concludes his paper by practical remarks, showing that the removal of these tumors by the knife is unnecessary.

8. A Case of Complete Placental Presentation. By W. A. SKINNER.

The object of this paper is to show the influence of galvanism in exciting uterine action, as well as to illustrate the practice of separation of the placenta in cases of unavoidable hæmorrhage.

9. A Case of Labour complicated with a Double State of the Internal Sexual Organs; and a report of other cases of defective development of the female sexual organs. By HENRY OLDHAM, M.D.

In this paper Dr. Oldham treats of the defective development of the internal sexual organs of the human female. A case of labour with a bifid vagina, in which the diagnosis of this curious complication was detected by the author, is related, and a diagram of the parts is appended. The histories of other cases

of double uterus, in the unimpregnated state, and one of complete absence of the internal sexual organs, are related.

There is a full account of a low type of womb, in which all the parts are equally small. The author calls this the "*undersized womb*." He traces the cause of this condition to a partial organic failure at the age of puberty, and he refers to two complications: first, the deposit of tubercle in the uterine glands, forming "uterine phthisis;" and the second, an anteversion of the body of the uterus, from thinning of the cervix. The cause of this displacement, in the author's opinion, is not from shortening of the round ligaments, but "from the weight and peristaltic wave of the small intestines acting on the thin yielding neck."

The undersized womb is accompanied with scanty and painful menstruation and sterility, and Dr. Oldham, in speaking of remedial measures, refers to the mechanical treatment of sterility generally, of which there are three methods in practice:—

1st. Dilatation with bougies, or section of the os uteri, internum or externum.

2d. The removal of front or back displacement of the womb by Dr. Simpson's uterine supporter.

3d. Tubal catheterism.

With reference to the first and last, Dr. Oldham remarks, that a true congenital stricture of the os uteri, internum or externum, or Fallopian tubes, sufficient to prevent impregnation, is *very rarely* to be met with; and yet nothing is more easy, when the idea of a mechanical impediment exists in the mind, than to be self-persuaded into the belief that the natural orifice is too small.

It would, in our judgment, be a perversion of language to call these instrumental practices scientific,—they are both un-scientific and unsafe. They are unscientific, in being used for cases in which the morbid condition has not been proved to exist; they are unsafe, because they are capable of producing fatal consequences.

With reference to their employment for anteversion or retroversion of the uterus, we, to the fullest extent, concur with Dr. Oldham in the opinion that these circumstances do not exist in any proportion to the large number of cases which are reported as calling for the uterine supporter invented by Dr. Simpson. The

anatomical relations of that organ admit of very considerable healthy variations in its obliquity of position. If these normal deviations from a certain assumed line of inclination be admitted as sufficient grounds for the adoption of instrumental practice, "as unphilosophical as it is disgusting," we are at no loss to account for the occurrence of such cases as Dr. Oldham has, in obedience to the dictates of duty, felt called upon to publish, and by which we consider he has done good service to medical science.

The dangers attending the artificial dilatation of the os uteri, and the use of Dr. Simpson's supporter for the relief of the displacements of the womb referred to, are forcibly shown by the narration of the two following cases which proved fatal:—

The first of these was furnished by Dr. Golding Bird, and a very careful description of the sexual organs is given by Dr. Oldham. A lady, æt. 36, came over from Jamaica in the hope of being cured of dysmenorrhœa and sterility. The os uteri was divided by an obstetric physician in London, and silver dilators were subsequently introduced, which caused her "horrible suffering." The treatment was left off for a time, and again resumed. On this occasion severe peritonitis ensued, and Dr. Bird saw her when collapsed, but shortly before her death.

On examination there were abundant traces of peritonitis. There was no stricture of the os uteri, but the ovaries were atrophied, which appeared to have been the real cause of the sterility.

The second fatal case was communicated by Mr. Bransby Cooper, and is as follows:—A young married lady, of great personal attractions, was attended by Mr. Cooper for a very painful fissure in the anus, which he divided, and speedily cured. She then spoke to him of what had been to her a very distressing social trouble, namely, her sterility, which she associated with a perfect indifference to sexual intercourse. Mr. Cooper examined the sexual organs; but as he did not discover any defect which could be remedied by surgery, he referred her to a physician-accoucheur. This gentleman detected the uterus in a retroverted state, which he looked upon as the probable cause of the sterility. For the cure of this displacement he introduced a uterine stem

supporter, which set up peritonitis, of which she died in three days.

The author has not tried tubal catheterism, nor is he disposed to do so.

What were the effects of such a fatal termination on the views of this obstetric physician we are not informed; but we concur in Dr. Oldham's regret that for the sake of humanity this physician has not had the courage to give to others the warning he had himself so bitterly experienced; however, we trust it will not be lost, though it may come a little later. We do not entertain very great fear of the extensive employment of Dr. T. Smith's catheter for the Fallopian tubes—it is scarcely probable, we believe, even during the present mania for uterine instrumentalising, that an instrument, the use of which is incapable of being demonstrated either upon the living or the dead body, should be extensively employed for a purpose so obviously fraught with danger to the organs concerned. It would, nevertheless, be a melancholy fact, that even one patient should suffer permanent injury, though she might escape with her life.

We have dwelt at considerable length upon Dr. Oldham's contribution to the Guy's Reports, on account of the vital importance to society at large of the points they have brought before us. We have embraced the opportunity of adding our voice to the loud and solemn warning which is conveyed by Dr. Oldham's cases, in the hope that they may save others from a similar fate. We should have been guilty of a dereliction of our duty did we pass without condemnation a rash and hazardous practice, which may deprive any of us of our wives, sisters, daughters, or mothers. The cases in which these operative proceedings are said to be required,—viz., those of anteversion or retroversion of the uterus,—are such as clinical experience teaches to be almost as common and as little worthy of notice as leucorrhœa, and equally curable, either by safe instrumental or by constitutional treatment. The bedside practitioner will at once acknowledge that the improvement of the general health, and the consequent increase of the tone of the organ, will do more to restore it to its position than propping it up by any so-called uterine supporter, and the fallopian tubes for mucous catheter cannot prevent the

even if it can remove it at the time of its employment, does not offer, even theoretically, so good a prospect of removing excessive secretion (itself an assumption, however) as remedies addressed to the general health.

A Practical Treatise on the Domestic Management and most important Diseases of Advanced Life; with an appendix, containing a series of Cases illustrative of a new and successful mode of treating Lumbago, and other forms of Chronic Rheumatism, Sciatica, and other neuralgic affections, and certain forms of Paralysis. By GEORGE E. DAY, M.D., &c. 8vo. pp. 342. London: T. and W. Boone. 1849.

WE are informed by the author in his preface that no systematic work on the diseases of old age has appeared within the last half century, except that of Cunstall (*Die Krankheiten des Höheren Alters und ihre Heilung*,—Erlangen, 1839). We should rather have been disposed to take this fact as an indication that the want was not felt, the more especially as the author gives bibliographical references, occupying four and a half of his pages, to works or papers more or less directly treating on old age and its health.

The first chapter contains an account of the changes occurring in the system in advanced life, and may perhaps be consulted with advantage by students. The same may be said of the second chapter, on the preservation of the health in declining life. The general observations on the medical treatment of diseases of advanced life, in the third chapter, are in conformity with the recognised principles of therapeutics.

Chapter fourth, on climacteric disease, the decay consequent on the previous wear and tear of life, has been already fully treated by Sir H. Hallford.

In the sixth chapter we find, by an extract from the Registrar-General's report, that the deaths above the age of sixty years have been chiefly from diarrhœa, influenza, erysipelas, typhus, and dropsy; the latter, as Dr. Day observes, being a symptom rather than a disease.

In the next chapter the author enters consideration of diseases of the organs, at the head of which, on account of its great frequency, he

places pneumonia. Among the causes of this inflammation Dr. Day mentions the act of lying too long in one position, as pointed out by Piorry. Bronchitis follows next in order; then bronchorrhœa, then asthma, hydrothorax, pulmonary œdema, phthisis, influenza, &c. The last named disease, it is well known, proves fatal mostly among the aged. The author extends his observations on this subject into a general history.

Diseases of the brain and nervous system are succeeded by those of the digestive tube and its appendages, and these, by diseases of the organs of circulation. In all of these, however, we are compelled to confess that we have looked in vain for any information which we have not met with elsewhere, either involved in the ordinary principles of medicine or in special sources.

Diseases of the urinary and generative organs constitute some of the most grievous infirmities of old age, and are at the same time among the least amenable to treatment. Dr. Day has described, in a concise form, the most important means of treatment. In this department, the author, from his known researches in pathological chemistry, is well qualified to offer an opinion.

The appendix is intended "to assist in extending the use of a form of counter-irritation, which (says the author) I have found of the greatest value in my own practice, and which is comparatively unknown to the great mass of the profession. It consists in the instantaneous application of a flat iron button, gently heated in a spirit lamp, to the skin." This method of treatment has lately been revived, and has, according to the author, been found singularly efficacious.

The treatise which we have here brought to the notice of our readers may be found of some service to junior practitioners, but we have not discovered from its perusal, that it has supplied any very urgent want for a standard work on this subject. Our opinion will, we think, be borne out by a reference to Dr. Watson's Lectures, Dr. Copland's Dictionary, and other systematic works on pathology and physiology.

Proceedings of Societies.

ACADEMY OF MEDICINE, PARIS.

Dec. 27, 1849.

PRESIDENT, M. VELPRAU.

M. GAULTIER DE CLAUDE read the report of the Commission on secret remedies.

M. PATISSIER read a report on the researches of M. Belloc, on the therapeutic employment of vegetable charcoal in idiopathic and sympathetic nervous gastro-intestinal affections. The report stated that vegetable charcoal, in large doses, is serviceable in these affections.

M. BRICHETEAU read a report on "paracentesis in chronic pleuritic effusions." The commission expressed their approbation of the works on these subjects by MM. Laverant and Boudant. Several commissions were then appointed, and the Academy adjourned. X

MEDICAL SOCIETY OF THE PARISIEN HOSPITALS.

Dec. 12, 1849.

M. LEGROUX, PRESIDENT.

M. HENRI ROGER was elected Secretary in room of M. Tardieu.

M. BECQUEREL submitted an essay on "the influence of albuminous liquids on polarized light, and the practical application thereof in the construction of an albumimeter." By the aid of this instrument the proportion of albumen in any fluid can be exactly ascertained, as it is graduated to meet the deviations caused by the albuminous fluid. This was described as an instrument of clinical utility in detecting the variations of the albumen of the serum of the blood under the alterations produced by disease, diet, &c. The result of the author's observations were detailed at considerable length.

M. VALLEIX presented a specimen of morbid anatomy, consisting of a portion of intestine, two centimetres = .787 Eng. in. in length, voided by an infant three months old. The child was of a sallow complexion, and had suffered from diarrhoea from birth. To the portion of intestine voided, two small vermiform appendices were attached, which contained fecal matter. The intestine appeared to have been invaginated. X

Medical Trials and Inquests.

REPORT OF A TRIAL FOR RAPE AND MURDER, WITH MEDICO-LEGAL REMARKS ON THE CAUSE OF DEATH. BY F. OGSTON, M.D., ABERDEEN.

[Continued from page 38].

THE medical evidence which completes the history of this trial I shall adduce at length from notes obligingly furnished me by the counsel and agent for the prisoner, as taken by them at the time. It is to the following purport.

John Abercrombie Gordon, surgeon, Fyvie, examined.—I know Mary Smith's house. I had occasion to pass it on the morning of the 10th of April. I heard of her death, and went in to the house. This was about half-past nine in the morning. I understood I was the first medical man who was there. I found the woman lying on her back, with her head to the back corner of the head of the bed. Her limbs were apart. I cannot say that her position was such as a woman would be in when having connection with a man. There was a frothy bubble about her mouth. I left the situation of the body unaltered. I merely put my hands upon the woman. The bedclothes were in a wrinkled condition. I returned to meet Dr. Davidson, and I left the body still undisturbed. I signed a report along with Mr. Davidson. (Here read his report, which was short, and only embraced the points brought out on his examination, with the addition of the following particulars—viz., right knee bent; ecchymosis on right side of neck, in a position precluding the possibility of hypostasis; tongue protruded; external parts of generation exposed, and blood issuing from the vagina.) From the appearance of the bed I should suppose there had been a struggle upon it.

James Shand, surgeon in Turiff, examined.—I am surgeon to the poor in Auchterless. The inspector of the poor directed me to go to Mary Smith's on the 10th of April last. I arrived at her house about eight o'clock at night. I observed that two of the tenors keeping the back corners at the head of the bed together were drawn out. I reported on the superficial appearances. I left the body undisturbed. (Here Mr. Shand read his report, which enumerated the facts and observations already detailed in the notes of the inspection, with the following additions—viz., the lower lip covered with froth; bluish discolouration of the right side of the neck; and two bluish spots on the back of the right hand, which might have been

produced by the pressure of the thumb, if shifted from its first position, or by the points of two fingers. The report concluded with the following statement of opinion:—"Considering the above appearances, it appears to me highly probable that rape has been committed, and death occasioned either by strangulation or suffocation." I still adhere to that report, judging from external appearances. It is possible that the appearances might have been produced if she had consented.

Francis Ogston, physician in Aberdeen, examined.—I inspected the body of Mary Smith along with Drs. Jamieson and Davidson, on the 11th of April. The body was lying in bed when we found it. I drew up a report of the state of the body (report read, see *ante*). I cannot speak with *certainly* as to the cause of death. I found a clot of blood under the integuments on the left side of the forehead. That was on the side next the back of the bed. I cannot speak as to how it was produced. It might have been produced by a blow, or by the woman knocking her head against the bed. The appearances about the genitals were such as might have been produced by a forced connection. These appearances might have taken place independently of sexual connection. A foreign body of equal size with a man's private part might have produced the appearances. I cannot say if the woman had died during the act of connection, assuming the connection to have taken place. Asphyxia means a stoppage of the breathing. Stoppage of the breathing may be produced either directly or indirectly. Direct asphyxia may occur naturally or by violence. Indirect asphyxia may be caused by disease in the brain. There were two states of the heart in Smith's case which might have favoured such indirect asphyxia. Indirect asphyxia may be caused by violence. In every case of apoplexy there is indirect asphyxia. Apoplexy may be caused by violence. Smith's death must have been caused by suffocation, or by disease of the brain. The brain in this case was loaded with blood. I saw no other means than violence of accounting for her death, if it took place by direct asphyxia. Pressure on the mouth and nose, and a weight on the chest, would bring on direct asphyxia. A weight on the chest alone, if sufficiently great, would cause direct asphyxia. If there had been determination of blood to the head that would increase the operation of the violence in producing direct asphyxia. Convulsions might have taken place before the woman's death. They form usually a part of the train of symptoms in direct asphyxia. I saw no reason to believe that in this case there had been

convulsions from natural causes. There was no wound, properly so called, within Smith's private parts. If sexual intercourse had taken place there was nothing to have hindered it from being complete. Assuming connection to have happened, the flow of blood from Smith's genitals would likely have been gradual. It would have required something equally large with a man's private part to have caused the genital appearances. The mark on the man's private part was such as might have been caused by intercourse.

Cross-examined.—I did not find any marks on the lower part of Robb's shirt. There was organic disease of Smith's heart. Such disease would have predisposed the party to sudden death. The heart was morbidly thickened on one side and morbidly thinned on the other. The brain was unusually firm, but I do not say that it was morbidly firm.

Re-interrogated.—The appearances in the heart in Smith's case were scarcely such in themselves as to show that the disease had been fatal. This state of the heart would have made any violent attack on her the more dangerous. Agitation would have been bad for her. The abrasions on Robb's face would have readily been caused by a person's nails.

James Jamieson, physician in Aberdeen, examined.—I inspected the body of Mary Smith along with Drs. Ogston and Davidson (see report). From the appearance of the private parts penetration was apparent from some body about the size of a man's private part. I did not see any appearance that the woman had died from natural convulsions. The fluid in the belly afforded a slight corroboration of the other appearances. A weight on the chest or belly might have produced asphyxia. The fluid in the chest and belly was merely an accompaniment of asphyxia. A hand on the woman's mouth, and the weight of the body of a man on her chest, would have accelerated asphyxia rather than any one of these singly.

Cross-examined.—The countenance of the woman was natural. Even if a struggle had taken place we might have found her features placid. There was nothing in her countenance which was inconsistent with death by violence. I consider Beck's opinion sound. Death by strangulation is caused by asphyxia.

Re-interrogated.—Smith had been dead about thirty hours when I saw her. If her features had been distorted at death they would have remained distorted. I think she had died from violence. There had been a struggle previous to her death.

As reporters were excluded from the court during the trial, I have no means of

giving, without injustice, even the shortest outline of the able pleadings of the advocate depute (E. F. Maitland, Esq.) on the crown side, and of the counsel for the prisoner (C. F. Shand, Esq.) on the other, or of the summing up by the eminent judge (Lord Cockburn) who tried the case. Suffice it to say that both the public prosecutor and the bench considered that Smith had died by suffocation, as set forth in the indictment.

The jury, after consultation, returned a verdict of Guilty against Robb on both counts, as libelled; coupled, however, with a recommendation to mercy, "as they did not think that he had had any intention of committing the crime of murder."

REMARKS.—Such is a pretty full outline of the whole history of this important trial, presenting, as it does, not only circumstances of unusual atrocity, but also several points of peculiar interest to the medical profession; to a few of which I would here take leave to advert.

As to the first charge against the culprit, or the crime of rape, little need be said. The proof of this offence in Scotland has of late been very much simplified, it being only required to constitute it, that there has been "penetration," to however small an extent, even in adult females. Such was the legal decision laid down in very distinct terms in the Court by Lord Cockburn, on the day previous to Robb's trial on the occasion of a rape case then before him. In regard to the position of the medical witness in such an instance as the one we are considering, where "the female is found dead," and he "is required to determine whether her person has or has not been violated before death," there is little or no room for difference of opinion. "He can seldom do more," says Dr. Taylor, "than express a conjectural opinion from the discovery of marks of violence on the person, and about the genital organs. Even," he adds, "if spermatozoa were detected in the liquid of the vagina, this would merely prove that there had been intercourse; whether violent or not must depend on circumstantial evidence." (Op. cit. 642.)

In the case before us the evidence was wanting which the discovery of spermatic matter sometimes affords, as well as other proofs frequently available on occasions of forcible violation; such as seminal and blood stains on the linen of one or both of the parties, and marks of blows on the breasts or limbs of the female. Yet, notwithstanding this, the person of this woman presented indications of a forced connection before death sufficient to meet the requirements of the law of this country. The position was precisely such as the body

would have retained had complete insensibility come on while a male was in the act of making entry within her body. The abrasion of the fourchette, the bruising of the carunculae myrtiliformes, and the flow of blood from the vulva, were all such occurrences as would have followed the entrance to at least a certain extent of some such body as the male penis within the vagina. In addition to this we have the scratches on Robb's face, and these all on the *left* side of it, where they would most likely have been, if produced by the woman's nails in her resistance to violence of this sort; and also such an abrasion on the inside of his prepuce, as would have been readily caused in his attempting to effect an unwilling connection. All these circumstances, together, certainly point to a forced sexual intercourse, as the explanation which would naturally present itself to most minds on considering their direct bearing; and though not in themselves absolutely demonstrative of such an occurrence, or otherwise inexplicable, they are perhaps to be regarded as being as strongly corroborative of the weighty proof from other circumstantial evidence laid before the jury in this instance, as any that could have been expected to be furnished from purely medical sources.

Taking leave, therefore, of the first charge as being clearly proven, the second charge, or that of murder, appears to me to demand a fuller consideration. The point which on medical grounds seems to me to be *not unassailable*, regards the conclusion come to by the bench and the public prosecutor, as to the *immediate cause* of the woman's death. Assuming, as they were fully entitled to do from the evidence before them, that she had died under circumstances of violence, it is not by any means so clear that her death was undoubtedly caused by suffocation.* Even now that the whole of the circumstances of the case are before us, we are still met with the same difficulties which the inspection of the body set in array against the formation of an *unqualified and perfectly satisfactory opinion* on the subject in discussion. It still appears to me to be a question open to consideration whether the asphyxia which was indicated by the appearances in the body had in this particular instance been *direct or indirect*, primary or secondary; i. e. whether the conclusion justified by the pre-

misses is, that the victim of Robb perished from violent and direct interference with her breathing, or that her struggles had induced such a comatose state of the brain from intra-cranial congestion as to have produced indirect arrest of the respiration. Neither of these suppositions is, it is conceived, inconsistent with the facts of the case considered either morally or medically, nor does there appear to be such a preponderance of evidence in favour of the one as to negative the possibility of the other, or to authorize an unqualified decision in either direction.

In the first place, the obvious consideration occurs, that between death by coma and death by asphyxia in the restricted sense of the word, there exists in many cases no further recognisable distinction than that in the one mode of decease respiration is arrested "through the intervention of insensibility," and that in the other mode of death it is arrested by a "direct impediment to the access of air to the lungs," (Alison's Physiology, p. 327), and that consequently on many occasions the one form of the fatal event cannot be distinguished from the other on a post-mortem inspection. The exceptions to this state of matters which occasionally arise in practice originate in one or other of the following *specialities*. Either from circumstances the comparative amount of congestion of the heart and lungs is so marked on the one hand, or that of the brain on the other, as to lead at once to the conclusion that in the former case the death has proceeded from direct asphyxia, and in the latter case from coma; or we find in either case appearances *superadded* which are sufficiently characteristic of some of the special modes of sudden death in either of these two ways. Thus, in the case of direct asphyxia, hanging or strangulation is characterized by the mark of the ligature and the local violence about the neck to which it gives rise, and drowning by the light watery froth, and the water which may be found in the air-passages, lungs, and stomach. But that the case before us does not belong to either of these categories will be evident on a little consideration. In Smith's body there was not that decided preponderance of congestion within the head, and comparative absence of it in the heart and lungs, which would have justified, on good grounds, an unqualified decision in favour of death by coma: neither was there here that marked degree of comparative congestion of the right heart and lungs,* as con-

* In the remarks which follow it is not intended to interfere with the legal merits of the decision of the Court or Jury, while it is as little intended to argue that they were not entitled to act on the more probable opinion in regard to the cause of death. The question is meant to be taken up and argued merely as a *medical one*, on which a hasty and dogmatic opinion is calculated to lead to injurious consequences in medico-legal science.

* The bloody serum in the chest and belly certainly pointed, so far, to such a congestion of the veins of these cavities as to have led to the escape of its thinner portions after death by its presence had some influence on me to the probability

trasted with the state of the brain, which would have authorised a positive opinion on the side of death by ordinary asphyxia. Equally observable was the absence, if not entirely, yet to a considerable extent, of those superadded appearances decidedly indicative of coma or of direct asphyxia, and the want of which throws us back to the more general inference of asphyxia in its wider sense, as not excluding either supposition. There was no effusion of blood or of serum within the head serving to suggest the existence of sanguineous or serous apoplexy. If, then, the woman died by coma, it must have been by the congestive form of this last disease. By the application of the same test—viz. the characteristic appearances—we get rid of several of the forms of direct asphyxia, leaving only that one of them which so seldom presents us with any distinctive signs—i. e. death by suffocation. Between these two possible modes of death—apoplexy and suffocation—it appears to me that we must be prepared to choose and to discriminate, if we are to arrive at any certainty as to the cause of Smith's death. Let us consider; then, the circumstances brought out on Robb's trial, with the view of deciding on the probabilities in favour of one or other of the two occurrences.

One of the leading features of the case in hand was the strong proof it offers of a severe struggle having taken place between the parties. This in itself might easily have led to cerebral congestion, but obviously not by any means so readily to direct asphyxia. Again, the state of the heart in Smith would have facilitated the same occurrence: the attenuation of its right walls retarding the return of blood from the head, and the hypertrophy of its left ventricle accelerating the circulation within the cerebral vessels.* The tendency to this form of disease would have also been the greater in the present instance, as the brain itself, though not probably to be set down as hypertrophied to any marked

being in favour of direct rather than indirect asphyxia. That the fluid was not dropsical appeared from its red colour. Its inflammatory origin was here out of the question.

* The influence of certain diseased states of the heart in favouring, not to say causing, apoplexy, has been admitted by most pathologists, and is sanctioned by experience. Thus, omitting some instances of valvular disease of a doubtful character, in 30 cases of pure congestive apoplexy suddenly fatal which I have had occasion to examine during upwards of twenty years of medico-legal practice, I find that in 8 of these cases (i. e. in 26·6 per cent. of the whole) such diseased states of the heart were noticed as under: viz. attenuation of the right with hypertrophy of the left heart, 3 cases; attenuation of the right heart, 1 case; attenuation (flaccidity) of both sides, 1 case; hypertrophy generally, 2 cases; and hypertrophy of the left heart, 1 case.

extent, was noticed to be "unusually firm," and the party had reached a period of life when dangerous consequences from this condition of the central organ of the circulation might have been justly dreaded from the application of such exciting causes as either sudden excitement or violent corporeal struggles, not to speak of the combined and simultaneous operation of both on the same occasion. To this might be added the effect of the emphysematous state of the lungs—a position of matters not unlikely to favour the production of coma under a sudden acceleration of the circulation. But to this last I would not attach any undue importance, as this condition of the lungs would obviously have been almost equally operative in facilitating death by a direct stoppage of the breathing.

There is one circumstance, however, to be observed in the case before us which may at first sight seem to negative the possibility of death by congestive apoplexy. I allude to the bloodless state of the scalp,—a condition the very opposite of that which is usually encountered to a greater or less extent in all plethoric individuals who perish in this way. The absence of this appearance, I may observe, nevertheless may be explained when it is taken into account that this woman was not at all plethoric; and, further, that her head, prior to the time of our examination of it, had remained elevated on a pillow for a period of at least thirty-six hours—a position of the head which would have favoured the gravitation of the blood, fluid as it was, to the dependent parts of the body. Besides, a gorged state of the scalp is not a constant phenomenon in undoubted instances of death by apoplexy.* With this exception, then, giving it all the weight which can be reasonably claimed for it, the other appearances within the body were quite consistent with the assumption of death in this particular mode. The sinuses and veins within the head were unusually loaded with dark fluid blood; the pia mater was minutely injected; the interior of the brain was closely studded with bloody points, and its cortical and grey matter generally presenting a rose hue, while the internal jugular, and especially the vertebral veins, poured out blood in considerable quantity on the removal of the encephalic mass,† — circumstances

* In the 30 cases of congestive apoplexy previously referred to, a bloodless state of the scalp was noticed in 5 instances, or in 16·6 per cent. of the whole; while in one other instance it was noticed as being only "somewhat bloody."

† Have we a congestive form of spinal as of cerebral apoplexy? In four instances of what was considered the latter disease, I have seen a great accumulation of fluid blood about the top of the spinal canal, as compared with its amount within

which, though not inconsistent with the idea of death by direct asphyxia, were all of them indicative rather of death by coma than in this last way.

The above remarks have not been adduced with the view of proving that death in this case certainly took place by coma, but merely in order to show that such a mode of death was not impossible, or even unlikely, in the circumstances under which Smith must have been placed at the time of her decease; and, besides, that such an explanation of the manner of its occurrence is not incompatible, if it is not to some extent confirmed by the state of the body of the woman at the period of its inspection.

The other point to which I would call attention is the consideration of the facts in the evidence which are in favour of the assumption of the Court, corroborated, as it was, to some extent, by the opinion of myself and colleague, and more fully, though still cautiously, and with a prudent reserve, by another of the medical witnesses—viz. that death here was caused by one at least of the forms of direct asphyxia, i. e. by suffocation. In proceeding to do so, I shall first notice the circumstances present in Smith's case which might serve to indicate generally that direct asphyxia was probable, and which, consequently, would militate against the possibility of her death having been owing to coma or indirect arrest of the breathing. These circumstances, which seem to have weighed strongly with the Court, were the position of the tongue, the froth at the lips, the lividities at the fore parts of the body, the expulsion of the fæces, and the unnatural position of the limbs,—phenomena, without doubt, more frequently to be met with after death by direct than by indirect asphyxia. This, in common fairness, is all the degree of consideration which, as I conceive, they are entitled to claim from us. They are not, either singly or in combination, so peculiar to the former of these modes of the termination of life, as to settle the point in its favour with unhesitating certainty in an otherwise doubtful case. Thus, in actual practice, while I have seen the tongue protruding from betwixt the teeth in seventeen out of thirty cases of direct asphyxia,*

the cranium, and in these death was almost instantaneous. In a fifth instance of the same kind, the addition to this of a large clot within the spine settled the point in favour of spinal apoplexy.

* These cases will be allowed to be adduced in perfect fairness, when it is mentioned that only two of them occurred under circumstances of violence, and that, consequently, they cannot be regarded as picked illustrations: seven of the cases were children who had been suffocated or smothered from accidental overlaying or over-

which I have had occasion to examine (i. e. in 56.6 per cent. of these), I have also met with the tongue in the same position sufficiently often after death by congestive apoplexy, to weaken my reliance on it as an infallible distinctive sign: in fact, it has been so encountered by me in seven out of thirty such cases, or in 23.3 per cent. of the whole.

Froth about the lips or nostrils, and in the air passages, and in the air cells of the lungs, is even a more equivocal sign of primary asphyxia than the protrusion of the tongue. Thus, although it was present in seventeen of the thirty cases of asphyxia referred to, it was also detected in the same situation in ten of the thirty cases of apoplexy, or in the ratio of 56.6 per cent. of the former to 33.3 per cent. of the latter.*

Lividities in front of the body are still less to be trusted to as a distinctive test of direct or primary asphyxia, having been noted in eleven of the thirty cases of this form of death, and in as many as eight of the cases of apoplexy,—i. e. in the proportions of 36.6 per cent. of the one, and 26.6 per cent. of the other—a difference too inconsiderable to be relied on in a case of this sort.

Again, as to the expulsion of the fæces in each of the contrasted forms of death, the number of instances in which this occurrence was observed were exactly equal, being but three in each, or six in all.

Once more, the unnatural position of the limbs does not appear to me to have any special bearing on the mode of Smith's death. It indicated that the cadaveric spasm, which had fixed the limbs at death in the position they had previously occupied, had persisted, and so retained them until the usual cadaveric rigidity had developed itself in the body. Now, although this phenomenon is one which is found after death by drowning, and oftener still after

wrapping; seven were adults, suffocated from their faces getting buried in bedclothes or in pillows while in an unnatural position when in drink; six were also adults, who had perished from the inhalation of irrespirable gases; two more were likewise adults, asphyxiated from mechanical compression of the chest; and the remaining eight, adults too, were instances of suicidal hanging, in six of which the bodies had only been partially suspended on the ligature, parts of their bodies having been found resting on the ground.

* The situations and relative frequency of this appearance in these will be seen as under, viz.—

In Apoplexy. In Asphyxia.			
	Cases.	Cases.	
Froth about the lips . . .	2	3	
Froth about the nostrils . .	2	1	
Froth in the mouth . . .	3	1	
Froth in the larynx, trachea, or bronchi (once copiously) . . .	3	12	
Froth in the air cells (in 3 copiously)	6	10 (once sparingly.)	

death from the inhalation of irrespirable gases, it is not at all very uncommon after death from different diseases, particularly phthisis, apoplexy, and other diseases of the nervous system. I once encountered the immediate passage of cadaveric spasm into cadaveric rigidity in the body of a common prostitute, who was found in the same position as Smith, having died in the act of sexual connection, and who, on a medico-legal inspection, was proved to have perished from pneumonia, under which, in an aggravated form, she had been labouring for some time. The result of this examination led to the immediate liberation of three young men who had been with this woman at the time of her death, and who had been apprehended on suspicion of having been concerned in it. With the view of inculcating proper caution in dealing with cases of this sort, and in drawing inferences from such circumstances as we have been considering, in proof of death by violence, and in one mode rather than in another, I would take leave to refer to one other instance where cadaveric spasm was met with on an occasion which gave rise to suspicion of unfair dealing:—Hugh Gauld, a spirit dealer here, one night last month was found by a policeman lying dead in his back shop, and precisely in the same position as Smith, except that he was stretched on the floor. His small clothes were unfastened, and his head doubled up against the foot of a heavy wooden table, which lay overturned at his left side. When seen immediately after, I found froth about his nostrils, his tongue protruded, and his face, and the fore part of the neck, very livid. The lividity, at the inspection of the body on the following day, was found to have increased in intensity, and to have extended to the upper and fore parts of the chest. The air cells of the lungs were filled with mucous froth. From the state of degeneration of the coats of the arteries at the base of the brain, and the very congested and loaded condition of the scalp and encephalon, no doubt was left on the minds of the examiners that Gauld had died from apoplexy, occurring in the natural way. This view was confirmed by the inquiries of the legal authorities, who discovered that the man had been alone at the time of his sudden death. The state of his clothes is readily accounted for by supposing that he had gone into the room to pass his urine, a vessel half full of which was discovered there in a cupboard. This man was strongly built, and very powerful, and latterly well known as a pugilist.

Notwithstanding these admissions, which deduct from the value of the circumstances just noticed, as pointing rather to death by direct than by indirect asphyxia, still the

weight to be assigned to them is such as is not to be concealed or evaded. But before we can admit their application to the case in hand, and give our assent to the admission to which they would lead us, a little further consideration must be given to the difficulties in the way of our coming to even this qualified decision. For if, on the one hand, it must be conceded that there were no absolutely certain data on which to rest the proof of direct asphyxia, were there, it may be asked, on the other hand, any circumstances in this case hostile to such an assumption, or calculated to diminish its probability? To this inquiry we now turn.

The form of direct or primary asphyxia, which the public prosecutor wished to bring out at the trial, was that of suffocation; and to this form of asphyxia I shall limit my further remarks. But how stands the evidence in proof of this mode of homicide in Smith's case? "Homicide by suffocation," says Dr. Taylor, "would not be attempted in healthy adult persons, unless they were in a state of intoxication, and thereby rendered defenceless." And again, "it is certain that most individuals" so situated "would have it in their power, unless greatly incapacitated by disease or intoxication, to offer such a degree of resistance as would leave upon their persons indubitable evidence of murderous violence" (Op. cit. p. 726). None of these favouring circumstances,—greatly incapacitating disease or intoxication,—were present in this instance; while it was very evident that, notwithstanding the necessarily attendant surprise and terror which must have accompanied the assault, whatever its nature, the woman had been at the time in a condition to offer, and had actually offered, such a degree of resistance to her assailant as would have left on her body "indubitable evidence of murderous violence," had suffocation been attempted.* Such, at least, is a probable inference, though I agree with Dr. Christison in thinking that we are not entitled "to expect strongly marked appearances in every case of death by suffocation" (Ed. Med. and Surg. Journ. xxxi. 243). Some such local injuries, it must be observed, however, were present in all the reported cases of homicidal suffocation, or even of smothering, that are to be met with in medico-legal

* I have known in practice attempts at both homicidal suffocation and strangulation; but in these the assailants were successfully foiled, not, however, without leaving indications on the party assailed to show the nature of the attempt which had been made, and to corroborate their statements. Thus, in one woman, who had been seized by the throat with one hand, while her mouth and nostrils were closed with the other, she readily extricated herself, but not without abrasions of the throat, epistaxis to some extent, and bleeding from the mouth.

works. There is a difficulty, too, in our getting rid of the improbability of Robb's attempting two apparently incompatible objects at one and the same time.

In common fairness, I do not press into this discussion a few minor points, the absence of which, as was attempted to be shown on the defence, might be seized on as bearing against the probability or possibility of death by suffocation,—such as lividity and turgidity of the face, distortion of the features, prominence or protrusion of the eyes, and effusion on the surface of the brain. I do so for the obvious reason that no great importance is to be attached to them either one way or the other,* although their absence in a case of supposed homicidal suffocation is *pro tanto* unfavourable to such an assumption.

I have thus endeavoured to point out, as fairly as I could, the difficulties in this important case which stood in the way of our forming a very decided opinion in favour of either of the two modes of death which the evidence of the post-mortem inspection of it showed to be possible, and to be consistent with all the facts elicited by us at the time.

Such a course as was followed by my colleague and myself at the precognition and on the trial (when almost nothing further was elicited than at the outset) may appear to have been a very unsatisfactory proceeding in a case of such consequence, but it is a course which the imperfect state of medical science must occasionally render inevitable on the part of the medical jurist, if he conscientiously endeavours to adjudicate honestly between the rights of the subject on the one hand, and the requirements of the law on the other. "In medical jurisprudence," writes Dr. Taylor, "there is not, perhaps, an instance in which we have fewer medical data upon which to base an opinion than in the case of alleged death from suffocation. The inspection of the body of a person suffocated presents so little that is peculiar, that a medical man, unless his suspicions were roused by circumstantial evidence, or by the discovery of foreign substances [about

the mouth or throat], would probably pass it over as a case of death without any assignable cause,—in other words, from natural causes" (Op. cit. 723).

With this remark from the highest quarter,—a remark which might be extended to many cases of death by coma,—I should have taken leave of the case of the Crown v. Robb, but that one further opening has been left for assisting in the solution of the mystery necessarily attendant on Smith's death. I am aware that the dying declarations of criminals are far from being conclusive evidence; still, such declarations, uttered and recorded with due solemnity in the immediate prospect of death, if consistent with the circumstances otherwise known, are not to be thrown aside as utterly worthless in a case like the present. Such a dying declaration was committed to writing by Robb, and read by his desire at his meeting with the public authorities on his way to the scaffold. By this document, which is subjoined,* it will be seen that no hint is given at any attempt at suffocation; so that, after all, though the death of his victim by direct asphyxia had the balance of probabilities in its favour, the verdict of "Not proven" is the one for which we are still entitled to contend in respect to this assumed mode of Smith's death. With regard to the affirmation of Robb, that "the crime of rape was not committed" by him, this apparent suppression of the truth must evidently be understood to imply that *full sexual intercourse*, or perhaps even *full penetration*, had not been accomplished,—an additional proof of the involuntary nature of the connection, as far as the woman was concerned, and one more instance in illustration of the difficulty in the way of the complete violation of the person of an adult female who is both able and determined to defend her chastity.

Aberdeen, Oct. 31st, 1849.

OBITUARY.

On the 14th of November, 1849, at Meerut, East India, Dr. Thomas Curry Elliot, 6th Bengal Light Cavalry, aged 50.

On Saturday morning, the 5th inst., at Ilfracombe, Jesse Foot, Esq., surgeon, formerly of Jamaica, aged 70.

* In the cases of suffocation already referred to in previous notes, distortion of the features and prominence of the eyes were met with in the six individuals who died from the inhalation of noxious gases, while in five of these there was blood effused between the membranes of the brain. Such appearances are, however, now admitted to be rare in other forms of direct asphyxia. I only observed an anxious state of the countenance in two out of the seven children who died from overlaying or over-wrapping, and in one of the seven adults who had perished while in drink from getting into such a position in bed as to interrupt their breathing. I have seen the features placid in three cases of violent hanging.

* "I hereby confess that I entered the house of Mary Smith when I was under the influence of drink, with the intention of ravishing her; that while struggling with her, in order to accomplish my purpose, she coughed twice or thrice, and then ceased to breathe. And I hereby declare that the crime of rape was not committed.

"This confession, made and written in the presence of Mr. Strahan (the chaplain of the prison), this 10th day of October, 1849.

(Signed) JAMES ROBB."

Correspondence.

REMARKS ON THE ALLEGED MORTALITY IN
CHILDBIRTH IN EDINBURGH, AND ON
THE USE OF CHLOROFORM IN MIDWIFERY.
BY WM. SCOTT CARMICHAEL, SURGEON,
EDINBURGH.

SIR,—A correspondent whom you allow to write anonymously in your journal observes (see *MEDICAL GAZETTE* for Dec. 21st, page 1079), "in the able and interesting lecture of Dr. Barnes on the rational and safe conduct of labour, I was struck with the fact of the gradually increasing mortality from childbirth in Edinburgh during the years 1847 and 1848, having been exactly coincident with the introduction of chloroform, and its extensive use in midwifery in that city."

Now, permit me to observe that any increase of mortality that might have happened in Edinburgh from childbirth in 1847 could not be owing, as your correspondent gives out as a fact, to the introduction of chloroform, as the anæsthetic effects of that agent were not found out by Dr. Simpson until November of that year.

What, then, was the cause of this increased mortality? Dr. Barnes, in the article of the journal to which your correspondent refers, states to your readers, or rather to his pupils, as "worthy of remark, that during 1846, especially in 1847, and yet more in 1848, the deaths in childbed in London were unusually numerous, owing to the prevalence of puerperal fever." He as carefully omits to mention to your readers and his pupils that, owing to the prevalence of the same disease, the mortality in childbed in Edinburgh, and in different parts of Scotland, was unusually great in 1847 and 1848. He might have found various allusions to this effect in our periodical literature; but perhaps he was ignorant of these, and is perhaps not answerable for them. But an allusion to this fact existed in a paper with which he was quite familiar, and from which paper, indeed, he professedly draws his Edinburgh statistics,—viz., Dr. Stark's Reports on the Mortality of Edinburgh and Leith. "The deaths," says Dr. Stark, "from childbirth during 1846 amounted in Edinburgh to 43 only, but during the past year they increased to 74. This increase occurred chiefly during the last quarter of the year, when many cases of puerperal fever occurred." We repeat, why did Dr. Barnes think it right to omit this important fact in reference to Edinburgh, when he stated it so broadly in regard to London?

But, omitting these points, is the com-

parison which Dr. Barnes institutes between the mortality in childbed in Edinburgh and London correct in other respects? Most assuredly not. In London the returns of death in childbed and otherwise are correctly registered, in so far as they are authenticated by the certificates of the attendant medical men. But Dr. Barnes omits to mention that we have no registration bill for Scotland. We have an old and imperfect record of baptisms and funerals, but the deaths are not "registered" in Edinburgh in the sense in which that word would lead strangers to believe from Dr. Barnes' table.

In two or three years Dr. Stark attempted to ascertain the causes of death among the population, and it is upon these attempts Dr. Barnes founds his deductions; but, in order that his deductions may be correct, his data must first be so. The truth is, that we do not believe that a single medical man in Edinburgh places or ever placed the very slightest degree of reliance upon Dr. Stark's statistics, however much they might admire his zeal in attempting to collect them. In our fourteen or fifteen churchyards, when a person is buried, the recorder, or clerk to the churchyard, makes an entry of the name, age, &c., of the person interred, and the disease of which they are supposed to have died. For the knowledge of this last point,—viz., the disease of which the person died—they never have a medical certificate; but, as I have been informed by all the recorders with whom I have come in contact, they worm it out of the undertakers or the friends, and enter it to the best of their combined ability.

I am sure neither you, Mr. Editor, nor any well-informed medical man, could for a moment suppose that any degree of reliance was to be placed upon medical statistical facts of such a character.

During the last few days I have, along with the recorders, carefully looked over the mortality records, kept in our Edinburgh burying grounds, as well as those of the adjoining parishes, and find that for the three years specified, the returns of the deaths in childbed, as given by Dr. Stark and Dr. Barnes, are by no means correct. Thus, in the year 1846, Dr. Stark represents the number of deaths in childbed in Edinburgh as 42, whereas there are only 34 set down as such in the church records to which I have referred. In 1847, as 74, whereas they only amount to 61; and in 1848, as 63, whereas they only amount to 57.

But even granting that Dr. Stark's returns are correct as regards the books, of what value are they as matters of fact? and this, Mr. Editor, is the principal point. One or two sentences will show this. In order

to ascertain if all of those entered under the title of death from childbirth had really died in childbed, I took from one of the records a list of the residences of 12 of the individuals recorded as having died of childbirth, with a view to inquire into the facts. The following were the results:—

In eight of the cases, in consequence of the removal of the friends and relations of the parties, I was unable to obtain any traces whatever of their history; in one, I found the statement correct, the woman having died a fortnight after delivery; of the three remaining cases of alleged childbirth, one had died *ten months and a half* after the birth of her last child. The second, as I ascertained from being shown the medical history of her case, died of consumption and Bright's disease, complicated during its course with abortion. And the third died of an attack of epidemic fever, but in the hospital record there is no mention made of her having been pregnant or of her having been delivered, before or during the course of the fever.

These cases afford, I believe, only too true a sample of the perfect inaccuracy of the medical "facts," upon which Dr. Barnes and your other correspondent venture to found their attack upon Edinburgh obstetric practice; but really, what could we expect more from the medical knowledge of those who have attempted to collect and decide the medical data for the medical statistics of Edinburgh—viz., the undertakers and clerks to our cemeteries?

Is not the whole merely a sad satire upon medical statistics?*

In my researches into the mortality registers of Edinburgh I was also particularly struck with the class from which this great mortality in childbed in 1847-48 was drawn. They were the very lowest class,

most probably attended by midwives, if attended at all, and most certainly but rarely, if ever, enjoying the benefits of such an expensive medicine as chloroform then was.

Some of the reviewers and correspondents in your journal during the past year have spoken of chloroform as making little way in midwifery practice in London; here in Edinburgh and elsewhere, the use of it in midwifery is as firmly established as any other practice that you can name. And we only laugh at your London prejudices and objections to it, knowing as we do from abundant experience that there is no foundation whatever for any of them; but at the same time no one wonders that such objections and prejudices are current in London.

In his *Life of Jenner*, Dr. Baron mentions that vaccinations and gas lights were publicly lectured against and condemned in the English metropolis as two contemptible absurdities. After vaccination was everywhere introduced over the kingdom, small-pox inoculation still continued to be practised at the small-pox hospital in London. Dr. Stark, the authority upon whom Dr. Barnes so much depends, states* that "gas is universally used in Edinburgh in place of candles or lamps, and introduced into almost every room of every class except the very lowest." The exception here is to find a private house, without it, in every room; and we know the same to hold good in most provincial towns. The exception in London is, to find a private house fully lighted with it, but no doubt the day will betimes arrive when London will take advantage of the long established and good gas habits of the provinces. It will be the same with chloroform in midwifery.

In your last journal you review the first volume of the *Transactions of the American Medical Association*. You are so far, however, behind, for the association have had another meeting, at which their knowledge of chloroform in surgery and midwifery had been matured by a year's additional experience. I shall quote the reports of that experience as recorded in the *Philadelphia Medical Examiner* for June, 1849. The first quotation refers to surgery:—"Dr. R. N. Smith, of Baltimore, presented and read the annual report of the Committee on Surgery. A large portion of the report was occupied in the consideration of anæsthetic surgery, to which it was entirely favourable. The committee consider it inadmissible to perform a serious surgical operation without the use of chloroform, inasmuch as by it both safety

* At a meeting of the Medico-Chirurgical Society of Edinburgh, in February last year, Dr. Seiler, the esteemed President of the Royal College of Physicians, showed, that in a report of the mortality of the Edinburgh epidemic fever of 1847-48, the deaths were represented as high as 80 or 60 per cent., while the most exact returns proved that the mortality up to that time had not exceeded 10 per cent. At the same meeting Dr. Myrtle stated, and afterwards proved, that the number (485) which in the report alluded to had been reckoned as the number of deaths from fever, within a certain period, related not to the death from fever, but to the number of coffins supplied to all who had died within the parochial boards of the city, in a destitute state, within the period referred to. "This," says Dr. Seiler, "turned out to be the truth;" and then at the end of five months, a contradiction was made in the newspapers; but not before this apparently official testimony to the great mortality from fever in Edinburgh had been copied into the continental journals, probably to make the round of Europe, with small chance of being followed by the tardy contradiction.—See Dr. Seiler, on the *Signification of Fact in Medicine*, page 16.

* *Medical and Surgical Journal*, vol. lxvii. p. 62.

and immunity from pain are secured. Of the two prominent anæsthetic agents, chloroform and ether, the former is preferable, inasmuch as its unfavourable effects, when they do occur, are visible at once, whereas, when ether is used, its consequences sometimes remain long after. Dr. Smith thinks he has traced irritative fever to the influence of the latter agent."

"Chloroform is the most powerful anæsthetic agent known, and requires that care should be used in its administration. It should never be used in trivial cases, nor in diseases of the heart: a due admixture with atmospheric air is also requisite for safety. In careful hands it is an invaluable agent. The author of the Report has administered it *thirty-four* times to one patient, a young woman, to the extent of complete insensibility, without any unpleasant result. Professor Mott, of New York, has performed operations which he would not have attempted without the aid of chloroform. In the administration of it, it should be stopped the moment that insensibility occurs. Professor Simpson has published his opinion that one hundred lives have been preserved by the use of chloroform, where one has been lost by its use. He further states, that the mortality where chloroform is used is much less than in similar cases where its use is dispensed with."

In the first volume, which you have reviewed, the American reporters to the Association stated, that "the anæsthetic agents, ether and chloroform, have now (1848) been used in perhaps 2,000 cases of midwifery; and so far as the committee have been able to learn, without a single fatal result, and few, if any, untoward results." After a year's further experience we are told that the greater part of the Annual Report of the Committee on Obstetrics was "occupied by the discussion of anæsthetics in midwifery, and in order to present the subject candidly to the Association, the *principal* objections of those opposed to its use were incorporated into the Report. The committee gave it as their deliberate opinion, that the chances of a patient's recovery are greatly increased by the use of anæsthetics, and the question is not now, whether they may or may not be rightfully administered, but whether they *can be rightfully withheld*."

Who that has once compared the panting and exhausted subject of an instrumental labour with the calm and tranquil recipient of anæsthesia, could fail to arrive at the same conclusion? In regard to the choice of anæsthetics, the report declares that chloroform has every advantage over ether, except in point of safety, but that in experienced hands this objection does not

obtain. The report was accepted, and referred, *without comment*, to the committee on publication;" and this, allow me, Mr. Editor, to point out in a city (Philadelphia), the medical men of which were at first as strenuously opposed to anæsthetics, both in surgery and midwifery, as you profess still to be in London.—I am, sir,

Your obedient servant,

WM. S. CARMICHAEL.

3, Dean Terrace, Ed nburgh,
Dec. 29, 1849.

* * We beg to assure Mr. Carmichael that our attacks are not directed against persons, but against modes of treatment, when they appear to us to be condemnable. It is a great misfortune that those who introduce new remedies invariably conceive themselves to be *personally* attacked if objections are offered to the general employment of these remedies. Our correspondent has a right to his opinion that chloroform is an invaluable blessing in obstetric cases: we retain ours that it is a dangerous and capricious medicine. The safe use of it on one occasion is no criterion that it can be safely employed a second time in the same person. A lady who inhaled it in one accouchement with benefit, had a narrow escape of her life in a subsequent labour, although it was administered by the same accoucheur under precisely similar circumstances. The numerous deaths from this vapour which are now recorded, are, we think, sufficient to justify the great distrust which has been shown to its use by English practitioners generally; and the alarm of the public and profession has been by no means diminished by the sturdy denials on the part of chloroformists that they were caused by their favourite remedy. In the analysis of the American journals we shall not fail to notice whatever may appear favourable or unfavourable to the use of chloroform. The review referred to by our correspondent had been for some time in type, and we have not yet prepared for insertion our analysis of the later American journals.

With respect to the statistical question at issue between Dr. Barnes and Mr. Carmichael, we shall only observe that it clearly proves the necessity of a registration of deaths' bill for Scotland. Dr. Stark has the reputation of being a good statistician; and it is therefore not unnatural that, in the absence of any legal record, Dr. Barnes should have placed reliance upon his results. It is clear, however, from Mr. Carmichael's researches, that a mere record of the number of deaths, without tracing them to their special causes, is only liable to mislead the medical inquirer. It does not appear that the alleged increase of

deaths in the obstetric practice of Edinburgh was due to chloroform.

We can admit no reply to this letter, except in so far as it may bear upon well-ascertained facts connected with the use of chloroform.

ENGLISH GENERAL PRACTICE AND MR. SYME'S LETTER ON MEDICAL REFORM.

SIR,—In your leading article of this day (4th instant) you have so clearly pointed out the differences in the education of Scotch and English medical practitioners, and have so kindly helped Mr. Syme in *some other respects* to a clearer understanding of the medical reform question, that not only that gentleman, but the profession generally, owe you thanks, also, for your lucid exposition of the anomalous position of the members of the Royal College of Surgeons of England.

There is, however, one sentence in Mr. Syme's pamphlet which, not having fallen within the scope of your observations, may pass current with, and so mislead many, as to the true position and character of English general practice; and to this point I beg your permission to address a few remarks.

Mr. Syme states—"Nearly the whole medical practice of England, of a general or family kind, is in the hands of those who supply the medicines which they prescribe, and are, in fact, remunerated for professional services by the price attached to their drugs."

I confidently assert that Mr. Syme has not taken sufficient pains to acquaint himself with facts before he drew the above humiliating picture of English general practitioners. That the drugging system here alluded to has obtained too extensively, cannot be denied; but, whilst making this admission, I deny its present universal adoption, as stated by Mr. Syme. It may be fairly assumed that I represent by far the larger and the most respectable section of general practitioners, when I distinctly repudiate the charge. I affirm that the general practitioner, as a rule, considers himself, from the superiority of his acquirements to those of the apothecary of old times, entitled to the remuneration of his skill, in the first place. The custom and requirements of society have rendered it absolutely imperative and unavoidable that, except in the metropolis itself, the family medical attendant must also supply the medicines. Indeed, in the present untested and unequalled condition of the drug trade in the districts any other arrangement is impossible. I have, for many years, in the habit of charging on the fee charged has been

those medicines *which the disease alone has absolutely demanded*, and none other has been or need be supplied under this, the only fair system of remuneration. By this means the requirements of both patient and attendant have been met, and the treatment is no longer fettered by pecuniary considerations—an arrangement which has been found to be most cordially accepted by the public.

But besides the general practitioner, or anomalous member of the College of Surgeons, there are a great many physicians in London who carry on, in every sense of the word, a general practice. These gentlemen ordinarily write prescriptions, and so do very many general practitioners; while beyond this there is no earthly difference in their line of practice, that I can discover, except that the former too often adapt their prescriptions to the procuring of the druggist's recommendations; the amount and mode of direct remuneration being otherwise the same in both cases. It may be said that the physician does not practice midwifery; but that objection to the parallel fails, from the fact, that it is perhaps the obstetric physician who most frequently trenches upon the province of the general practitioner.

But in thus speaking of provinces and limits, I am discussing arbitrary distinctions, which must after all be in a great degree dependent on public convenience or caprice—the only injustice perhaps, after all, is that the uneducated and unqualified should be permitted to practice without any check. However this may be, it is quite clear that Mr. Syme has misrepresented the character of the "general or family practice of England," when he tells his readers that our patients are compelled to swallow (or to receive) drugs by way of remuneration of our medical and surgical skill.

Mr. Syme's error has in some measure arisen out of his having mistaken the exceptions for the rule. These exceptions consist chiefly in the form of "open surgeries," alias drug-shops, and in the counter and visiting practice of mere druggists, who, having acquired a smattering of medical terms, deal them out to their customers, while at the same time they mount a brass plate with "Surgeon" on their doors. I have neighbours of this quality myself, and the whole thing has no novelty in England, although Mr. Syme seems to be ignorant of the fact.

The mode of remuneration by fees is not an of very recent introduction amongst English general practitioners. From the commencement of the agitation of medical reform, the evils of the "drugging system" have been promi-

nently before those of us who have at heart the advancement of professional character. In proof of this statement I will quote a few words from the indignant remonstrance of a "general practitioner" on this subject which I met with several years ago in one of the daily journals:—"Such a state of things cannot be right, nor can any body of men among whom it exists expect to be otherwise than uneasy under it. Is it honest—strictly honest? Not merely honest as a matter of trade,—but is it doing unto others as we would they should do unto us? Is it honourable? Is it even respectable? Unhesitatingly I aver it is not. Is it necessary? Can we not earn an honourable living by the practice of a noble science and art, without descending to the paltriest tricks of the paltriest of hucksters? Again I aver, it is altogether unnecessary, superfluous, and disgraceful."

This extract will satisfy you, I trust, that Mr. Syme has described a bygone state of things, and one which the English general practitioners have themselves been foremost in doing away with.

I beg to inclose my name to you, and subscribe myself, on behalf of my brethren,

Your most obedient servant,

A GENERAL PRACTITIONER.

Jan. 4, 1850.

CASE OF IDIOPATHIC INFLAMMATION OF THE TONGUE. BY DR. SCHNEIDER.

A STRONG robust woodman, after exposure to inclement weather, was seized with sore throat and difficulty of swallowing. These symptoms were neglected by him. In a short time the tongue became so swollen that he was nearly suffocated. Dr. Schneider being summoned to him in great haste, found him in considerable danger. The tongue was of a bluish-red colour, and so tumefied as to fill the whole mouth and protrude beyond the teeth. On the right side the throat was hard and tender to the touch. The pulse was full and quick. The patient was bled to twelve ounces, and sixteen leeches were applied to the throat. These means gave relief; still greater benefit was experienced from a longitudinal incision in the tongue, a quarter of an inch in depth. An antiphlogistic mixture of nitre and Decoot. Althea was at the same time employed. Deglutition and speech were restored, but the patient still felt severe pain deeply in the substance of the not yet completely reduced tongue especially during the deglutition of liquids. A poultice was applied to the painful part for three days, at the end of which time the swelling subsided by the discharge of a considerable quantity of fetid pus, and the cure was rapidly completed.—*Casper's Wochenchrift*, No. 23, 1849.

X

Medical Intelligence.

STATISTICS OF THE CHOLERA IN PARIS. ITS MORTALITY IN 1832 COMPARED WITH THAT OF 1849.

In addition to the other statistical tables of cholera which have appeared in this journal, we publish the following summary of the deaths in private dwelling-houses reported in each arrondissement of Paris, with the corresponding population. We place on the opposite side an analogous summary of the deaths from the epidemic in the year 1832:—

Arrondissement.	Deaths in 1849.	Present population.	Deaths in 1832.	Population.
1	836	108,019	600	66,497
2	915	117,888	535	75,087
3	500	68,710	403	49,071
4	449	48,233	528	45,151
5	1,023	96,628	519	66,547
6	1,120	108,795	817	81,037
7	837	72,893	1,021	58,944
8	1,143	109,925	1,306	72,729
9	717	51,308	1,239	41,895
10	1,137	98,635	1,685	81,480
11	514	65,652	1,041	50,506
12	1,759	98,100	1,194	70,189
Total	10,950 8,041*	1,034,286 —	11,168 7,234*	759,135
Total	18,991	—	18,402	

From a comparison of this table it appears that in the year 1849 there was an average of one death out of every 54.46 inhabitants, or 18.36 deaths out of every 1,000; in the year 1832, on the contrary, the average was one death out of every 42.7 inhabitants, or 23.4 out of every 1,000. This result, which was perhaps unexpected, positively proves that in the epidemic of 1849 there were five deaths less out of every 1,000 inhabitants; and it will be readily understood that the surplus of 589 deaths in that year (1849) is insufficient to correspond with an addition of nearly 800,000 souls to the population of Paris since 1832; we may therefore be allowed to conclude that the second epidemic was far less violent than the first. Moreover, if—as we have done in order to obtain the averages given of the epidemic of 1832—the number of the garrison (which was increased enormously in 1849) be added to that of the present population, the result is an average

* Deaths in the civil and military hospitals.

of only one death out of every fifty-seven inhabitants, or seventeen per 1,000. These results, however, are for the most part less favourable in Paris than in the provinces, where the average was only about one out of every sixty-four, or thirteen out of every 1,000. As regards the differences of intensity of the two epidemics during each of the months in which it prevailed, the following table will supply some interesting data:—

1849.		Deaths in Dwelling-houses.
March		180
April		694
May		2,426
June		5,769
July		419
August		810
September		670
October		32
1832.		
March		40
April		7,462
May		440
June		546
July		1,820
August		643
September		107
October		—

This table also proves that the epidemic of last year took more time to attain its utmost development than that of 1832, as it only attained its *maximum* in the month of June, whereas the epidemic of 1832 attained its *maximum* in the month of April. Finally, the epidemic of last year did not disappear till towards the end of October; that is to say, nearly a month later than epidemic of 1832.

NUMBER OF STUDENTS IN EDINBURGH.

THE total number of students attending the University of Edinburgh this year is 1,274, being 90 more than last year. Of these, 412 attend the medical, 656 the literary, and 206 the law classes. The increase in the number of medical students, over that of last year, is 44.—*Edinburgh Monthly Journal*, Jan. 1850.

PRIZE FOR THE PREPARATION OF ARTIFICIAL QUININE.

THE *Société de Pharmacie* of Paris offers a prize of 4000 francs for the production of artificial quinine—i. e., of the alkaloid, formed without the use of cinchona, or other vegetable containing quinine. If quinine cannot be produced, the prize will be given to the person who exhibits a new vegetable principle, natural or artificial, resembling quinine in all its properties, and capable of being used instead of it in medical practice.

All memoirs on the subject to be addressed to the secretary-general of the *Société*, before the 1st of January 1851.—*Edinburgh Monthly Journal*.

ARSENIC IN UNFERMENTED BREAD.

WE predicted some time since that accidents would arise from the use of common muriatic acid in making unfermented bread. The following extract is quoted from a letter by Mr. Davis addressed to the *Provincial Journal* of December 26th. It comes in the shape of a communication from Dr. Henry, who says—

"My attention was forcibly called to the question of impurities present in the common muriatic acid, by the injurious effects of bread made on the non-fermented principle, upon my own family and myself. In all, nausea and severe pains in the stomach followed its use (continued for three weeks before discovery); in some, instant vomiting and irregularity of bowels, though not actual diarrhoea; and in one case (my footman), the outbreak of the eczema arsenicale.

"I lost no time in testing the acid for metallic impurities, but, not happening to have any sulphuretted hydrogen, could at first detect nothing. When I procured some, I was astounded by its throwing down a dense yellow precipitate, which I at first suspected to be tin (from knowing that the manufacturers also made muriate of tin), but soon discovered to be arsenic."

It has been long known to English chemists that much of the sulphuric acid sold is largely contaminated with arsenic. It is the sulphuric acid manufactured from pyrites which generally contain arseniuret of iron. Arsenic, therefore, may be thus transferred to nitric acid, muriatic acid, and numerous salts in the preparation of which sulphuric acid is largely employed. It may even find its way into the diluted sulphuric acid used medicinally. Under a proper system of medical police, the sale of this poisoned acid would be strictly prohibited.

Selections from Journals.

DENTITION IN OLD AGE.

M. PLESSINCK records the following case, in the *Transactions of the Medical Society of West Flanders*:—

A woman, named De Vaere, aged 92 years, towards the beginning of this year suffered from swelling of the gums of the lower jaw. In a short time an incisor as white as snow appeared, then a second, then a third; all three side by side: after

a few weeks two new molars made their appearance also in the lower jaw. These teeth were probably wanting in perfect fangs, as they were very far from firm in the mouth. Unfortunately, the old woman died soon after. There was no opportunity of ascertaining, by dissection, how many more teeth might have been developed. X

ON THE ACTION OF VARIOUS SUBSTANCES
INJECTED INTO THE ARTERIES. BY M.
FLOURENS.

1. Of different substances injected into the arteries, some destroy sensibility without abolishing motion, and others abolish motion without destroying sensibility. Thus, *e.g.*, dilute sulphuric acid, alcoholic and acetic ethers, alcohol, chloroform, ammonia, &c. cause loss of motion without impairment of sensibility: when powder of liquorice, pepper, hemlock, valerian, belladonna, oak-bark, naphtha, &c. are suspended in water and injected, the nerve loses its sensibility, but motion is unimpaired.

2. Of the various substances which produce paralysis of the limb, into the artery of which they are injected, some produce relaxation, others a tetanic condition, of the muscles. Among the former are powdered liquorice, pepper, hemlock, oak, belladonna, sulphuric and acetic ethers, sulphuric acid, camphor, alcohol, &c.; among the latter are turpentine, bergamot, chloroform, oils of cloves, fennel, mint, rosemary, and creosote.

3. Among the substances which produce paralysis with muscular relaxation, are those which, acting on the posterior roots of the spinal nerves, cause insensibility; among those which produce paralysis with tonic contraction of the muscles are those substances which act on the anterior or motor roots of the spinal nerves.—*Comptes Rendus*.

X

ON THE VARIATIONS IN THE PROPORTION
OF CARBONIC ACID EXHALED BY THE
HORSE IN A STATE OF REST AFTER SEVERE
EXERCISE, AND IN DISEASE.

M. LASSAIGNE gives the following conclusions as the results of a series of experiments:—

1. The proportion of carbonic acid expired by the horse is augmented by exertion, except in Arabs of pure blood, in which the proportion is always greater than in common horses of other breeds.

2. In affections of the pulmonary organs, attended with constraint of their actions, the quantity of carbonic acid gas is decreased.

3. In acute inflammatory disease the proportion is considerably augmented.—*Journal de Chimie Médicale*.

X

ON WHITE BLOOD. BY MM. CHAUTIN AND
SANDRAS.

In June, 1847, a patient at the Hôpital Beaujon was bled from the arm for symptoms threatening apoplexy, in whom the blood when drawn presented a whitish tinge as it flowed from the vein. The serum resembled an emulsion, and was slightly reddened by a few blood globules in suspension. There was not sufficient fibrin to retain the globules in the clot, a part being suspended in the serum, and the remainder subsided. The serum was inodorous, insipid, and faintly restored the blue colour to reddened litmus. Under the microscope it presented a great number of fat globules, resembling those of milk, with here and there some of a larger size, and others, like the latter, were formed by the union of several of the smaller globules.

HEALTH IN CALIFORNIA—ENCOURAGEMENT
TO MEDICAL EMIGRANTS.

No facts have yet been presented to show that life is more perilled in any part of California, by the climate, than in the New England States. Very recent advices indicate that the deaths, in proportion to the whole number of emigrants who have arrived at San Francisco, are really few in number. Even the vertical sun, pouring down upon the heads of the excited gold diggers at the Placers, creates much less sickness than could rationally have been expected, located as they are in a new country, surrounded by strange and exciting scenes, and in the midst of privations to which most of them are wholly unaccustomed. Physicians are represented to be well paid, whenever they are consulted, receiving sixteen dollars for a professional visit. Some have actually taken a hundred dollars a day. But a practice of that profitable kind cannot be expected to last long in a country as healthful as the neighbourhood of San Francisco, though sudden alarms in regard to the public health would naturally enough give occasional unwonted activity to medical practice. But well-taught physicians and surgeons will always be sustained in communities where intelligence characterizes the people, as it does there. The new inhabitants have carried with them, from their father-land, kind sympathies, regard for the sciences, and the precepts and ordinances of religion. Physicians, therefore, will continue to be in demand, notwithstanding the hundreds which are already there or are on their way, and notwithstanding the general healthiness of the place. It is presumed that many more physicians might now be profitably employed, professionally, in California, besides enjoying rare and unprecedented opportu-

ilities for laying the foundation of fortunes, by the purchase of lands, &c. Never were such strong inducements held out to those of a bold, enterprising spirit, as are now opening in that rising state. Instead, therefore, of wearing out life by hopes deferred, young, ambitious medical aspirants, who have no very stringent ties to bind them here, would there have a clear field before them, and space enough for displaying all their powers most advantageously. On the other hand, those who have already located themselves and been patiently waiting one or two years at home, to be *in demand*, should be firm in the determination of remaining where the battle is already half won. Patient waiters are no losers. To abandon a post, when the object of its maintenance is nearly brought within grasp, would be the *ne plus ultra* of bad management. Business invariably comes, if we are capable of performing it, and wait long enough to have it known that we intend to be patronized.—*Boston Medical and Surgical Journal*.

CASE OF MELANOSIS — REMOVAL OF THE TUMOR — HISTOLOGICAL EXAMINATION.
BY DR. BEREND, BERLIN.

WE submit to our readers an abstract of this case, which presents several points of interest.

Madame K—, thirty-four years of age, had always enjoyed good health: had from her birth borne a brownish black spot, the size of a lentil, on the tip of the left ear; when she had attained the age of a year and a half, this spot began to increase in size, and gradually acquired the size of a walnut. About thirteen months since, this tumor was removed by a provincial surgeon. Fourteen days after the operation a small pea-shaped tumor appeared, which rapidly attained its present size. The tumor was painful in bad weather, but did not interfere with the general health: its rapid growth, however, was a cause of anxiety to the patient, and led her to consult Dr. Berend. The tumor extended from the root of the ear downwards three and a half inches, and was two and a half inches in width. It was apparently divided into three portions: it filled the space from the angle of the jaw to the mastoid process. The upper and largest division was connected with the ear, and its limits were not distinctly defined. A segment of this part, about the size of a walnut, was of a bluish black colour, while the remainder exhibited a blood-red hue. The second division of the tumor was smaller than the first, and was of a bluish-red colour; while the third, which was altogether the smallest, resembled, in external appearance, a cervical gland.

Examined with a lens, the discoloured portion of the integuments presented a varicose state of vessels. The whole mass of the tumor was moveable, and not painful to touch. Deglutition and mastication were unimpeded.

An operation for the removal of the tumor having been determined upon, it was performed by Dr. Berend, with assistance, in the presence of Professor Schulz. The patient was rendered insensible by chloroform during the operation, which lasted half an hour. The wounds healed rapidly, and the patient recovered perfectly, leaving a slightly discoloured scar as the only trace of a rather formidable operation.

The microscopic examination of the tumor by Prof. Schulz showed a melanotic structure, mingled with malignant cancerous disease. On the outer surface the three segments were united in one row, and forming a tumor of stony hardness, which was attached to the subjacent structures by cellular roots. On cutting into the morbid growth, the interior of each of the three segments exhibited a jet black colour; its mass traversed in different directions by their septa and minute vessels, whereby its tissue, instead of being of a stony hardness like the integuments, rendered it soft and friable, and by gentle pressure it was reduced to a pulpy mass. This mass, under the microscope, was seen to consist of clear isolated cells. The greater portion of these cells possessed black nuclei, forming the melanotic substance, perfectly opaque, and, when crushed, showing nucleoli consisting of the true melanotic pigment. The cell-membrane was perfectly colourless, soft, and transparent. The form of these melanotic cells was rounded, flat, varying in size only from one-sixtieth to one-seventieth of a line in diameter, so that at first glance they seemed to be all of one size. Between these black cells were scattered in scanty numbers, entirely colourless, rather oblong and flattish cells, some caudate at one end, some at both. Many of these were as small as 1-200th line diameter, while their length was from one-eighth to one-sixth of a line. Besides, there were spherical cells of one-hundredth to one-hundred and twentieth of a line in diameter, containing yellow nuclei; and mingled with all were numerous fat globules. The cancerous cell structure was wanting.

The form of its cells, as well as their individuality, did not distinguish this tumor from the non-malignant growths, as atheroma, lipoma, &c., while the malignancy which characterized its progress affords an example that our classification of tumors is untenable, since the same elementary forms are found in both malignant

and non-malignant structures. The malignancy of the disease, observes Dr. Berend, does not consist in its anatomical elements, but in that pathological condition of the blood which he has termed Dysplasmatic. —*Casper's Wochenchrift.* X

POISONING BY THE PASTE OF LUCIFER MATCHES.

Two children, one four and the other two years old, at 5 o'clock in the afternoon having, during the absence of their mother, obtained some lucifer matches, ate the phosphoric composition on them. They took their ordinary supper of milk with their usual appetite, were cheerful, and were put to bed at their usual hour. Shortly afterwards they were seized with symptoms which were regarded as those of cholera, and proved fatal in the course of a few hours in the elder, and in a few minutes with the younger. The cause was only accidentally discovered on the following morning.—*Journal de Chimie Médicale.* X

ON THE FUNCTIONS OF THE PANCREAS.

M. BERNAUD concludes from his researches into the composition of the pancreatic secretion, that it is the agent whereby the assimilation of fatty matters is effected. He shows that this fluid is alkaline, that it is capable, when obtained pure, of forming an emulsion with oily or fatty substances; he points out that the chyle does not appear in the lacteals above that portion of the intestines in which the pancreatic secretion is poured out, while in morbid states of the pancreas, where its secretion is deficient, fatty matters are voided undigested.

M. Bernard's conclusions have been adopted by a commission of the Academy of Sciences, Paris.—*Comptes Rendus.* X

WESTERN GENERAL DISPENSARY.

Dr. W. O. MARKHAM has been elected Physician to the Western General Dispensary in the place of Dr. Day.

BOOKS & PERIODICALS RECEIVED

DURING THE LAST TWO WEEKS.

Braithwaite's Retrospect of Medicine. Vol. 20, July to December 1849.

Pharmaceutical Journal. Jan. 1850.

Monthly Journal of Medical Science. New Series, Jan. 1850.

The Veterinary Record. Jan. 1850.

Rational Medicine. By Alex. Wood, M.D.

British American Journal. Dec. 1849.

Monthly Retrospect of the Medical Sciences. Nov. to Dec. 1849.

Irish Popular and Medical Superstitions.

Further Observations on Chloroform in the Practice of Midwifery. By E. W. Murphy, A.M. M.D. &c.

London Journal of Medicine. Jan. 1850.

Transactions of the Medical and Physical Society of Bombay. No. 9.

Edinburgh Medical and Surgical Journal. January 1850.

The British and Foreign Medico-Chirurgical Review. Jan. 1850.

Contributions to Mental Pathology. By James George Davy.

The Journal of Psychological Medicine and Mental Pathology. Jan. 1850.

On the Operation for Strangulated Hernia. By Henry Hancock, F.R.C.S.E.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.867
Thermometer 35.4
Self-registering do. Max. 43.6 Min. 25.3

From 12 observations daily. Sun.

RAIN, in inches, 0.0.—Sum of the daily observations taken at 9 o'clock.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Jan. 5.

BIRTHS.	DEATHS.	Av. of 5 Awt.
Males.... 816	Males.... 578	Males.... 585
Females.. 726	Females.. 555	Females.. 579
1842	1133	1162

CAUSES OF DEATH.

	Av. of 5 Awt.
ALL CAUSES	1133 1162
SPECIFIED CAUSES	1126 1156
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	179 307
Sporadic Diseases, viz.—	
2. Dropsy, Cancer, &c.	54 42
3. Brain, Spinal Marrow, Nerves, and Senses	146 125
4. Heart and Bloodvessels	42 40
5. Lungs and organs of Respiration	232 214
6. Stomach, Liver, &c.	63 66
7. Diseases of the Kidneys, &c.	15 11
8. Childbirth, Diseases of Uterus, &c.	6 10
9. Rheumatism, Diseases of Bones, Joints, &c.	10 8
10. Skin	1 1
11. Old Age	60 57
12. Sudden Deaths	29 12
13. Violence, Privation, Cold, &c.	49 36

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox..... 8	Convulsions..... 31
Measles..... 33	Bronchitis..... 105
Scarlatina..... 31	Pneumonia..... 95
Hopping-cough..... 23	Phthisis..... 129
Diarrhoea..... 8	Lungs..... 9
Cholera..... 1	Teething..... 9
Typhus..... 36	Stomach..... 6
Dropsy..... 20	Liver..... 9
Hydrocephalus..... 40	
Apoplexy..... 37	Childbirth..... 2
Paralysis..... 46	Uterus..... 1

NOTICES TO CORRESPONDENTS.

X. Y. Z.—It is not in our power to give the information which our correspondent requires.

CORRIGENDA.—In Mr. Francis's paper, in our last No. at page 12, and line 17 from bottom, after the parenthesis ending with the word structure, read "by its too forward position and".—In Dr. Ogston's paper, page 38, the word "ALLEGED" should be erased from the title.—Col. 1, line 7 from top, for "last month," read "the 19th September."—Same page, col. 1, l. 10 from top, for "gentlemen," r. "gentleman."

Lectures.

COURSE OF LECTURES

ON

DISEASES OF THE HEART.

Delivered at St. Vincent's Hospital during the Session 1849-50.

BY O'BRYEN BELLINGHAM, M.D.

Fellow of, and Professor in, the School of the Royal College of Surgeons in Ireland, and one of the Medical Officers of the Hospital.

LECTURE II.

Description of the heart, continued—Left chambers of the organ—Left auricle—Left auriculo-ventricular orifice—Left ventricle—Mitral valve—Aortic orifice—Semilunar valves—Corpora Arantii—Sinuses of Morgagni—Muscular tissue of the heart—Nerves and blood-vessels of the heart—Endocardium.

LEFT CHAMBERS OF THE HEART.

Left auricle.—The left auricle occupies the upper, the posterior, and the left side of the base of the heart; it has an irregular square form, the transverse exceeding the vertical diameter; its parietes are thicker, and its cavity is smaller than that of the right auricle; its interior is smooth, the muscular fibres in it do not leave interspaces between them, and muscoli pectinati are fewer. It consists, like the right, of a sinus, and an auricular appendix; the former receives the blood from the four pulmonary veins, and forms its principal bulk; it occupies the posterior part of the base of the heart, facing the bodies of the dorsal vertebrae, so that no part of it is visible when the pericardium is laid open. The auricular appendix (which is longer and narrower than that of the right side, and has its edge in general more deeply notched, or serrated), is situated at the lower and left side of the auricle, below the orifices of the left pulmonary veins; it comes forward at the left side of the base of the ventricle, where it lies to the left of the root of the pulmonary artery, and eventually a little in front of it; it is the only part of the left auricle which is visible when the pericardium is laid open, and will be found immediately under the cartilage of the third left rib. At the point where the auricular appendix joins the sinus of the auricle, there is a narrowing or contraction of the diameter of the cavity: this is sometimes termed one of the orifices of the auricle, but incorrectly, because the sinus and appendix form but a single cavity.

In the interior of the left auricle five orifices are seen; the largest is the auriculo-ventricular orifice, the other four belong to the pulmonary veins; the latter open, one immediately above the other, at each side of the sinus, the two right at its posterior and right side, the two left at its posterior and left side. The two upper orifices are larger than the lower, and sometimes the two pulmonary veins of the left side open by a common orifice, sometimes there are three veins on the right side. The right wall of the auricle is formed by the septum auricularum; this, which is sometimes described as the base of the auricle, is convex towards the left side: in it we observe the depression which marks the site of the foramen ovale.

Left auriculo-ventricular orifice.—This orifice, which forms the communication between the auricle and ventricle, is situated in the floor of the auricle; it has an elliptic, or more correctly, a crescentic shape, the long diameter being nearly transversely; it is smaller than the corresponding orifice of the right side; its margin is smooth, and consists of dense, white, fibrous, or tendinous tissue. The left auriculo-ventricular orifice is on a plane posterior to and to the left side of the tricuspid orifice, but nearly on the same level, as the heart lies in situ: it is situated behind the sternum, and upon a line with the junction of the cartilage of the fourth rib with that bone.

Left ventricle.—The left, the aortic, or systemic ventricle, forms the left and posterior part of the body of the heart; it has a conical form, the base above where it joins the auricle, the apex below where it forms exclusively the apex of the heart; its parietes are convex externally, and concave internally, equally upon the side of the septum, as in its left and posterior wall, so that the septum seems to project into the cavity of the right ventricle. The walls of the left ventricle are strong, thick, and muscular, about three times the diameter of those of the right ventricle, as was first pointed out by Riolanus; they preserve, consequently, their convex form after the cavity of the ventricle is emptied, while the parietes of the right ventricle collapse under similar circumstances. The left ventricle is longer than the right, but its cavity is smaller, and its carneæ columnæ are much thicker and stronger.

A small portion only of the left ventricle is seen when the pericardium is laid open; this is to the left of the sternum, extending from the cartilage of the third left rib, to the interspace between the fifth and sixth left ribs, near where the cartilage joins the body of those ribs. The appendix of the left auricle, which comes forward directly

beneath the cartilage of the third left rib, surmounts the left ventricle here.

In the cavity of the left ventricle, as in that of the right, two parts are distinguished, an arterial and an auricular portion, separated from one another by the right or anterior division of the mitral valve. The former is the smooth surface leading to the aortic orifice; it is smaller than the corresponding portion of the right ventricle, and is bounded on the right side by the upper part of the septum of the ventricles, and posteriorly by the anterior or right curtain of the mitral valve. The auricular portion forms the larger part of the ventricular cavity: it communicates directly with the auricle on the same side.

The auriculo-ventricular and the arterial orifices lie much nearer each other on the left than on the right side of the heart, being only separated by the right or anterior curtain of the mitral valve. The aortic orifice is on a plane above, anterior to, and to the right of the auriculo-ventricular orifice: the right or anterior division of the mitral valve which separates them is supposed to prevent the blood from entering the aorta while the ventricle is filling; but as the semilunar valves are closed at this period, it can scarcely have this use.

Mitral valve.—From the margin of the tendinous ring which surrounds the left auriculo-ventricular orifice, a valve composed of a double fold of the lining membrane, enclosing tendinous fibres, proceeds, the free surface of which hangs down into the ventricle; this valve is analogous in office to that of the right side, but is larger and stronger in all its parts: its chordæ tendinæ are stronger, and its carnæ columnæ are thicker.

This valve has more strictly two divisions than the tricuspid, and is properly termed *dicuspid* from this circumstance: one of these is anterior, the other posterior; the former being more to the right side is sometimes termed the right division, the latter the left. Vesalius compared this valve to a bishop's mitre, "*quas mitræ episcopali non admodum inepte contuleris*," and the name *mitral* has been almost invariably applied to the valve since.

The anterior or right division of the mitral valve is the larger; it ascends higher than the other, reaching to the base of the posterior and right semilunar valves of the aorta: its curtain forms in a great measure the septum between the aortic and the auriculo-ventricular orifices, so that when we remove it the two orifices seem almost to constitute but one; indeed, it was formerly termed the valvular septum of Lieutaud from this circumstance. The carnæ columnæ of the mitral valve are all attached to the posterior wall of the ventricle: those

of the anterior curtain arise from opposite sides of the posterior wall, each by two strong columns: the tendinous cords connected with them run towards one another, so that if continued along the curtain of the valve they would cross each other. The carnæ columnæ of the posterior division of this valve are three in number; they are shorter, broader, and less cylindrical than the fleshy columns of the anterior division. The strength of the chordæ tendinæ of this valve, notwithstanding their tenuity, is very remarkable: Senac tested it by isolating a single one, and attaching to it a four pound weight, which it supported for some time.

Aortic orifice.—The aortic orifice, like the pulmonary, has a circular shape; it is situated at the upper and right corner of the base of the ventricle, behind the orifice of the pulmonary artery, and on a plane lower down. It lies anterior to, higher up, and to the right side of the auriculo-ventricular orifice, but very close to it; these two orifices being merely separated, as I have said, by the right or anterior curtain of the mitral valve.

Semilunar valves.—The aortic orifice is provided with three valves, named semilunar by Morgagni, which are attached by their convex margin at the point where the aorta and left ventricle become continuous; their concave or free margin looks upwards. One of these valves is anterior, another posterior, and the third inferior: they are situated behind the sternum, towards the left side of this bone on a line with the space between the cartilages of the third and fourth ribs; their free edge corresponds (M. Gendrin observes) to the base of the pulmonary valves; a line drawn across the inferior margin of the third rib corresponds to the free border of the aortic valves, and to the base of the valves of the pulmonary artery.

The semilunar valves of the aorta resemble the valves of the pulmonary artery in almost every respect, but are thicker and stronger. They consist of duplicatures of the lining membrane, strengthened by tendinous bands; of these bands, one runs along the free margin of each valve, another along its base, and another, which is broader, runs upon each side of the corpus Arantii, and takes a semicircular course from this body to the attached margin of the valve. These tendinous bands have been recently described by M. Monneret as muscles: the action of one set of fibres (according to him) is to raise the valve, the other set are antagonists, and serve to depress them. But as the semilunar valves are elevated and depressed mechanically by the flux and reflux of the blood, it is not easy to perceive, Magendie observes,

what purpose muscles placed between the membranous folds of these valves could serve.

Corpora Arantii.—Near the centre of the margin of the free edge of each valve a little fibro-cartilaginous body is seated; these are usually termed "*corpora Arantii*," after Arantius, a pupil of Vesalius, who first accurately described them, though they had been noticed previously by Vidus Vidius; sometimes they are termed "*corpora sesamoidea*," or "*noduli Morgagni*." These little bodies are more distinct and larger in the semilunar valves of the aorta than in those of the pulmonary artery; their use is said to be to strengthen the central point where the valves meet, where the pressure is considerable, and the resistance least; as well as to fill up the little space which would be left in the centre when the valves fall down: but as these little bodies are not seated at the very margin of the valves, they could hardly effect the latter object, which, indeed, is unnecessary, as it has been shown that these valves slightly overlap one another in the healthy subject. The use of the *corpora Arantii* appears to me to be to serve as points of attachment for the tendinous bands already mentioned, by which the valves are strengthened; without some provision of this kind these valves would much more frequently become reversed and permit regurgitation than they do.

Sinuses of Morgagni.—Behind each semilunar valve the parietes of the artery are dilated, and a little pouch or sinus is formed, where the parietes of the artery are thinner than in other parts; these are the sinuses of Morgagni, or the lesser sinuses of the heart. They are better developed in the aorta than in the pulmonary artery, and in old age than in young subjects. In these sinuses the orifices of the two coronary arteries are seen, and Dr. Chevers distinguishes those from which the right and left coronary arteries arise, by the names *right* and *left*; the third he calls the *intermediate sinus*. The disposition of the fibres of the sclerous coat of the aorta in these sinuses, by which the parietes are strengthened, and the attachment of the valve secured, has been well described by him. The use of these sinuses is similar to that of the same parts at the origin of the pulmonary artery; they allow a space for the blood to insinuate itself behind the valves when the ventricular systole ceases, by which they are pressed down and the orifice closed a space for the semilunar valves to close in during the systole, which the channels through which the blood passes is rendered

The aorta is con-

stricted by the endocardium within, and by the serous and fibrous layers of the pericardium externally, which are continuous with one another in the heart and artery. When these are removed the junction of the fibrous membrane of the artery with the muscular tissue of the heart is seen to be by three crescentic prolongations or festoons, each of which has its convex margin towards the ventricle, and between each is a small triangular interval, the base of which corresponds to the base of the ventricle.

The place where the aorta joins the ventricle is marked by a tendinous ring (*zona tendinea*): the semilunar valves of the aorta are situated at this part, the convex margin of each being attached opposite to the convex margin of the crescentic prolongation above described, and each receiving tendinous fibres from this ring.

Muscular tissue of the heart.—The muscular tissue which forms the principal bulk of the heart is situated between the endocardium on the one hand, and the pericardium on the other, and differs from the muscles of animal life in several respects; the latter are connected together by cellular tissue, and with the naked eye are seen to consist of bundles of fibres, while the former interlace and cross in different directions: under the microscope, also, other differences are observed,—as the granular appearance of the fibres, and the less distinctness of the transverse striæ. The substance of the heart contains a larger amount of muscular fibre for its size than any other part, and its tissue is compact, firm, and close; for this reason the heart of animals, when cooked, cuts uniformly smooth in every direction, and "eats short," not offering that elastic resistance which other muscles do during mastication."

The use of the cellular tissue which connects together the fibres of the muscles of animal life, and which forms their sheaths, appears to be in a great measure to retain the muscular fibres within their proper sphere of action, and to strengthen them. In the heart, cellular tissue was supposed to be less necessary, in consequence of the manner in which the muscular fibres themselves are arranged; but Dr. Robert Lee* has recently shown that the heart is provided with a fascia which binds together and gives support to the muscular fibres in the same way as the fascia which invests the muscles of animal life. This, which he terms the "*cardiac fascia*," lies immediately under the true serous coat, and, after investing every part of the auricles and ventricles, it sends prolongations from its under surface, which surround the blood-vessels and nerves, forming sheaths for

* *Philosophical Transactions*, 1849,

them, and accompanying their branches between the muscular fascioli through the entire walls of the heart, from the surface to the living membrane, investing and binding all the parts together in the strongest possible manner, and giving firmness and strength to the organ.

A vast deal of pains, time, and labour, have been expended by anatomists in endeavouring to unravel the course of the muscular fibres of the heart; in many instances "they have succeeded (it has been observed) only in giving unintelligible descriptions." Recently Mr. Searle has undertaken the task: his account of the arrangement of the muscular fibres of the heart is contained in the *Cyclopædia of Anatomy and Physiology*; his description would, however, be utterly unintelligible without the figures with which his paper is illustrated; and, even with the assistance of these, the peculiar manner in which the bands, fascioli, and layers, which enter into the formation of the heart, are arranged, could scarcely be understood without quoting his description at length.

It will be sufficient here to observe that each ventricle has its own distinct sets of fibres, which form its sac; that another set of fibres surrounds, encloses, and unites together the two ventricles; that in the left ventricle six layers of fibres have been distinguished, in the right but three, which are arranged into a superficial, a middle, and an internal set; that the fibres are disposed in a spiral direction, "some winding round and round the ventricle," "some taking a larger sweep, and surrounding both ventricles;" that they interlace with one another, and that some are continuous with the carnes columns in the interior of the ventricles.

The septum is described by Mr. Searle as consisting of three layers—a left, a middle, and a right; the two former belong properly to the left ventricle; the right layer exclusively to the right ventricle.

In the auricles the fibres are disposed in two layers: its fibres "arise chiefly from the tendinous margins of the annulus venosus and annulus arteriosus." The peculiar shape of the appendices depends upon the manner in which the fibres are arranged, as also the appearance known under the name of the *musculi pectinati*. The fibres of the right auricle are prolonged so as to form the outer part of the wall of the left auricle, which, as it receives additional bands of fibres, is necessarily thicker than the right auricle. The septum of the auricles receives fibres from three sources—superiorly, in its middle, and inferiorly.

The cause of the conical form of the ventricular portion of the heart is explained by

Mr. Searle as follows:—"Along the central cavity of the left ventricle are placed the two carnes columns, the length of which is equal to the lower three-fourths of the length of the axis of this cavity. The fibres of these two bodies radiate, and the radiated fibres wind round the axis closely upon them. By this radiation, instead of all the fibres passing longitudinally, which would have preserved these bodies in a state of equal thickness throughout their length, they are progressively parting with their fibres, retaining but a few, which, by their longitudinal course, reach the apex; consequently these columns gradually diminish, becoming pyramidal, and form together an inverted cone; and as the fibres in well-formed hearts wind closely round these columns, the entire ventricle gently assumes the form of a cone; and although the right ventricle is, as it were, appended to the left, yet it is not so connected to it as to destroy the conical form, but, on the contrary, in such a manner as to form a concave parabolic section of a cone, which adapts itself to the gentle cone of the left ventricle. The two ventricles thus united assume the form of the more rapid cone of the heart."

Nerves of the heart.—The heart receives its nerves from both the ganglionic and cerebro-spinal system; the former are derived from the three cervical ganglions of the great sympathetic, and sometimes from the first dorsal ganglion; the latter are derived from the par-vagus or pneumo-gastric nerve, and from its branch, the recurrent or inferior laryngeal nerve.

The three cardiac nerves upon each side, which are termed respectively the superior, the middle, and the inferior, come from the superior, the middle, and the inferior cervical ganglia of the great sympathetic. The superior cardiac nerve communicates with the middle and with the pneumo-gastric nerve; the middle communicates with both the superior and inferior, as well as with the pneumo-gastric and recurrent; the inferior communicates with the middle and with the recurrent nerves.

The cardiac ganglion receives the superior cardiac nerves on each side, and a branch from the pneumo-gastric, and sends branches to the cardiac plexuses. The great cardiac plexus is formed by the middle and inferior cardiac nerves from opposite sides; it receives branches also from the pneumo-gastric and recurrent: it lies behind the ascending portion of the arch of the aorta, in front of the trachea, near its bifurcation. From it, lesser plexuses are formed, termed the anterior and posterior cardiac or coronary plexuses, which accompany the coronary vessels, supply the substance of the heart, and

communicate with the pulmonary plexuses.

The experiments of Volkmann go to prove that the movements of the heart are independent both of the brain and spinal cord, and that its movements "depend upon the ganglia and the nerve-fibres contained within itself; whilst centripetal fibres of these ganglia are found in the vagus, sympathetic, and in the spinal cord." It is to Dr. Robert Lee, however, that we are principally indebted for our knowledge of the ganglia and plexuses of the heart,—a subject which he has investigated with a patience and skill deserving of every praise. He has shown* that every artery distributed throughout the walls of the heart, and every muscular fasciculus, is supplied with nerves, upon which ganglia are formed. The number of these ganglia may be estimated by the fact that as many as ninety are visible upon the nerves on the anterior surface of the heart.

The following conclusions, under this head, are given by Dr. Lee:—

1. That the blood-vessels, and the muscular structure of the auricles and ventricles of the heart, are endowed with numerous ganglia and plexuses of nerves, which have not hitherto been described or represented in the works of anatomists.

2. That the nervous structures of the heart, which are distributed over its surface, to the apex and throughout its walls, to the lining membrane and columns carnea, enlarge with the natural growth of the heart before birth, during childhood and youth, until the heart has attained its full size in the adult.

3. That the ganglia and nerves of the heart enlarge like those of the gravid uterus when the walls of the ventricles are affected with hypertrophy.

4. That the ganglia and nerves which supply the left auricle and ventricle in the natural state are more than double the size of the ganglia and nerves distributed to the right side of the heart.

Blood-vessels of the heart.—The heart, although always more or less full of blood, cannot appropriate any of the fluid which passes through its cavities to its own nutrition; but, like every other organ, has peculiar vessels set apart to supply it: these are the two coronary arteries, which come off at the sinuses of Morgagni. The principal division of the anterior or left coronary artery lies in the anterior longitudinal groove; its other branch runs round the base of the left ventricle, in the circular or auriculo-ventricular groove. The posterior or right coronary artery is lodged in the circular or auriculo-ventricular groove,

and a large branch of it runs down the posterior longitudinal groove. These vessels anastomose freely with one another, and the grooves in which they run mark the site of the septum of the ventricles, as well as the line of separation between the auricles and ventricles.

The veins of the heart accompany the arteries, and end in a single trunk, which opens into the right auricle, between the Eustachian valve, and the right auriculo-ventricular orifice. A valve, formed by a semilunar fold of the lining membrane of the heart, partially closes the orifice here, and prevents regurgitation into it.

Endocardium.—The interior of the cavities of the heart is lined throughout by a very fine transparent and delicate membrane, named by M. Bouillaud the "endocardium," which is to the internal surface of the heart what the serous layer of the pericardium is to its external surface. This membrane is very smooth, highly polished, and analogous in almost every respect to serous membrane: it is continuous with the lining membrane of the large vessels, both arteries and veins, which open into the heart, as well as with the arteries and veins of the heart itself: it lines every part of the interior of the cavities of both the auricles and ventricles, covers the chordae tendinae and carnea columnae, and is reflected upon itself at the arterial and auriculo-ventricular orifices, to assist in forming the valves.

The endocardium is connected to the tendinous and muscular structures underneath by means of very fine cellular tissue, to which it is so adherent that it can only be detached by the scalpel in small patches. The adhesion is closer about the valves than at any other part, owing to certain fibrous expansions, which, proceeding from the orifice, are continued under the endocardium upon the curtains of the valves, particularly upon the left side, as well as towards the auricular and ventricular cavities.

The endocardium, in the right auricle and right ventricle, is continuous with the lining membrane of the venae cavae, and thus with the venous system throughout the body. The endocardium in the left auricle and left ventricle is continuous with the lining membrane of the aorta, and thus with the arterial system throughout the body. This helps to explain why morbid changes are so much more frequent in the left cavities of the heart than in the right; as arterial tissue is well known to be very subject to disease, while the coats of veins are comparatively exempt.

According to M. Bouillaud, the endocardium is somewhat more delicate and more extensive in the right cavities of the heart than

* Philosophical Transac.

in the left, and in the ventricles than in the auricles; and it is thickest about the arterial and auriculo-ventricular orifices. According to M. Bizot,* this membrane in early life has the same transparency, thickness, and consistence, in every part of the interior of the heart. Subsequently, a slight opacity begins to make its appearance in the vicinity of the semilunar valves of the aorta, and gradually increases, but is always most marked at the point at which it was first observed. As the membrane becomes opaque it appears also to become slightly thickened; but this is not due to the presence of a false membrane. It is a simple opacity, and appears to be analogous to the white patch upon the visceral layer of the pericardium. This appearance is only observed upon the left side of the heart. M. Bizot has never found it upon the right side; and age appears to have a marked influence upon its development; for it is very rare under puberty, and very frequent in old age.

The following table given by M. Bizot shows the comparative frequency of this opacity of the endocardium in the two sexes, and at different ages:—

Age.	Male.		Female.	
	Number of subjects.	No. of exam-ples.	No. of subjects.	No. of exam-ples.
1 to 15	11	1	23	1
16 „ 39	26	9	30	10
40 „ 59	18	6	15	10
60 „ 78	10	8	12	10

The important place which the endocardium occupies is shown by its being (as M. Bouillaud observes†) the *point de départ* of the most frequent and most serious lesions of the valves and orifices of the heart. Like the pericardium, it is liable to inflammation, but this is usually limited to the portion of the membrane which covers the valves or lines the orifices; and is, in a great measure, confined to the left side of the organ. The changes produced by disease in the valves and orifices of the heart will be considered under the head of Valvular Disease.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise on Thursday, January 10th, 1850:—Walter Arthur, Liverpool—Henry Scholfield Johnson, Liverpool.

* Mem. de la Soc. Med. d'Observation, tome i.
† Traité des Maladies du Cœur, 2nd edition.

FELLOWS' PRIZE REPORTS

OF

CASES OCCURRING IN UNIVERSITY
COLLEGE HOSPITAL,

SUMMER SESSION 1845.

By C. H. F. ROUTH, M.D. Lond.

GEORGE PLUMMER, æt. 17, admitted Tuesday, May 27, 1845, under Dr. Taylor.

CASE.—*Albuminuria—pneumonia of the superior lobe of the right lung, with fetid expectoration—simulating gangrene—tubercle (?)—bronchitis.*

(The particulars obtained from the patient himself, an intelligent lad.)

Of moderate stature; spare conformation; sanguine temperament; dark and ruddy complexion; eyes and hair dark. By occupation a labourer for the last three years without interruption. Single. Of regular habits. He drinks about Oss. of beer daily. Always warmly clad. Has always had sufficient food. Sleeps well, in health. Disposition cheerful.

He has resided at No. 2, John Street, Somers Town, for the last five years, in an upper and dry story. He sleeps with three other persons in the same room, which is close. Prior to this he lived in Middlesex Place, a very damp position, on a ground floor, and much exposed. Here he had resided ten years. It was so damp latterly that the walls used to be coated with moisture every night, and to a great extent. Has lived in London all his life.

Hereditary predisposition.—His father is healthy. His mother very delicate, but not liable to coughs. One of his brothers died of tabes mesenterica; another of hydrocephalus at ten years old. His grandmother was very liable to coughs, and his grandfather died of asthma at an advanced age. His other relations are healthy; nor is he aware that any of them have died of decline, or been liable to enlarged cervical gland, or other scrofulous disease.

Habitual state of health.—He himself has generally been healthy and strong; not liable to coughs before this attack. Never had rheumatism. He had hæmoptysis about a week ago, bringing up a small clot about the size of a pea, and of a bright red colour.

Present attack.—Last Monday fortnight, May 12th, he was seized with a headache, and pain in the right shoulder, catching him when he took a long breath, and his bowels were constipated. There was no sickness, shivering, or general pain, nor did he feel feverish. The only symptom which

his mother remarked was that he was more thirsty at his dinner than usual; but he was able to do his work. On Tuesday (13th) he continued much in the same state. On Wednesday (14th) cough set in; and he began, while at his work, to spit a great deal of frothy-looking sputa. He also believes that on this day his expectoration was occasionally tinged with blood, but he did not feel thirsty or feverish then, nor were any of the other usual signs of pyrexia present. There was only slight headache, and a pain of a dull heavy character about the right shoulder, but that he only experienced when he took a long inspiration, or coughed. There was no pain or tenderness in the hepatic region. He went home towards evening, when his mother gave him some salt and gruel. He slept well that night, but in the morning of Thursday (15th) the expectoration became, for the first time, *offensive*. He did not get up till late that day; and about eleven o'clock took some castor oil, which opened his bowels well. He perspired a good deal during the day, and was rather thirsty, but there was no sickness, headache, or rigors. He felt only a little more restless and fatigued than usual, and his appetite was very bad. Thursday evening he slept but very little, in consequence of the cough and expectoration, which latter was then exceedingly offensive, much more so than now, and of rather a dark colour, like slate, but he did not notice anything hard come up with it like a piece of substance. On Friday (16th) he came to the hospital to see Dr. Walshe, who ordered the following remedies:—*Emplast. Lyttæ loco dolenti*; *Mist. Salina diaphoreticum*, $\mathfrak{z}\text{ss}$. *ter. die*. He slept but indifferently that night. The blister rose well, and in the morning the pain in the shoulder was much relieved, since which time he has felt no inconvenience from it; and there was no fever. On Saturday, the 17th, he was much troubled at night with the coughing and spitting. On the Sunday morning he was better, and was able to take a little dinner. On the 19th he saw Dr. Walshe, who ordered *Mist. Tinct. Camph. co.* $\mathfrak{z}\text{ss}$.; *ter. die*. *Habent pil. et haust. aperient.* On Tuesday (20th) till Friday (the 23d) his cough continued very troublesome; the expectoration equally offensive. On the 23rd he saw again Dr. Walshe. He had not been sensible of any pain across the loins, but Dr. Walshe pressed him over this region, and it gave him pain. His urine, being tested, was found to be *acid*. He was ordered the following:—*dines, xvij. regiohe*
R Potass. Acet. gr
 $\mathfrak{z}\mathfrak{j}$.; *ter. die*.; *Cap*
 Saturday, the 23rd

the leeches, there was no more tenderness across the loins.

From the very commencement of his attack his urine was dark coloured, but undiminished in quantity. It had sometimes the colour of dark blood, but he never noticed anything like clots or coffee grounds in it. During the whole of his illness he denies positively having had any fever. No rigors, nausea, or general pains about his body. He had headache only during the first week, which was most severe on Wednesday, the 14th, on which day he left off work. He sweated a little at night, but not much. Previous to this attack he was not liable to night sweats, and had not lost flesh; but since his illness he has become very thin and weak, and been much troubled with perspiration at night. He was admitted in the hospital on Tuesday evening, the 27th. There was no fever at the time. He was ordered by Dr. Quain—*R Sol. Calcis. Chlorinate, ℥j*.; *Aque, ℥iss*.; *6tis horis sumend.* Low diet.

Present state.—May 28th.—Skin hotter than natural, but moist. No general pains or soreness. Feels rather weak and tired, but not particularly restless. The colour of his skin is natural. Temperature in the axilla, 97° F. No eruption, except a few sebaceous follicles enlarged on the back. He looks rather thin. He can lie in any position without pain. His decubitus, however, is generally on his right side. There is no swelling of the joints, or anasarca. His intellect seems clear. Expression of countenance perfectly natural; no trace of anxiety. His vision, and other organs of the senses, seem unaffected. No headache or giddiness, or the slightest amount of delirium. He does not sleep at night, as the cough is very troublesome. Face uniformly flushed, and the lips of a red livid colour. Memory good; no drowsiness. No spinal tenderness, or pain across the loins.

Thoracic organs.—The movements of the chest are regular; if anything, the right side moves less than the left. Respirations equally diaphragmatic and costal. Chest measures $27\frac{1}{2}$ inches at and just below the nipple; left half $14\frac{1}{2}$ inches. His voice is unaffected. Respirations easy, 27 in a minute. No pain in the chest. There is much cough, but it is loose in kind. The breath is exceedingly fetid, of a gangrenous odour. The expectoration is opaque, not at all tenacious, moderately thick, consisting of a mere transparent and fluid serum, a more opaque yellow portion: it does not contain much air. It is yellow and has a very fetid odour also, like gangrenous expectoration about $\mathcal{O}\mathfrak{j}$. in the 12 hours.

Physical signs.—In front the right infraclavicular space is smaller considerably than the left, and this difference is more marked on and above the clavicle. The dulness is not general, and does not seem to extend in front lower than the second rib. Respiration is strongly bronchial, almost cavernous, at this part, particularly towards the sternum, sometimes mixed with a little muco-crepitant roushus. Vocal vibrations are also stronger on this side. The respiration is weak in the lower part of both sides. Behind, the right side is universally duller than the left. The difference is much more marked on the upper part, — i. e. as low as the angle of the scapula, — than it is lower down. Between the lower angle of the scapula and the lowermost part of the right lung there is an interval of comparative resonance. The left side is not very clear on percussion. The respiration is also feeble in the lower part of the left side, both behind and in front. In the upper one-third of the right back, respiration is strongly bronchial or cavernous. No distinctly fine crepitation, but large muco-crepitant roushus. The respiration is feeble generally over the right back.

There is occasionally palpitation of the heart, but no pain. No regurgitation in the external jugulars. The external jugular of the right side seems more prominent than that of the left side. Heart sounds healthy; first rather more prolonged, perhaps, than usual. Pulse 90; soft and moderately full.

Abdominal organs.—There is no bad taste in his mouth. Tongue slightly furred. No sore throat or difficulty of deglutition. Appetite pretty fair. No nausea or vomiting. Bowels freely opened on the 26th; not since. Liver reaches one finger below the margin of the ribs; as high as between the fourth and fifth ribs. Its rounded edge can be felt through the abdominal parietes. The kidneys do not feel enlarged or painful on deep pressure.

He has passed $\bar{x}xx$. of urine since his admission: it is acid; sp. gr. 1015; of a dark opalescent brown colour, and albuminous. No excess or deficiency of phosphate. Under the microscope it contains hairs and epithelium parietes.

Supposed exciting cause.—He is not aware of any cause that could have induced the present attack. He had not been unusually fatigued, got his feet wet, or been exposed to cold at the time. $\bar{R}$ Aug. Calcis. Chlorinata, ad $\bar{m}xxx$. sing. dos.

May 29th.—He feels stronger to-day, and was actually up and walking in the ward, but was ordered to bed again. The expectoration amounts to about $\bar{x}xij$. in the twenty-four hours; still very fetid. Pulse

96; full, soft, and regular; not affected by change of position from a sitting to a recumbent posture. No pain in the chest. Breath equally fetid. He expands the chest more inferiorly than superiorly. Physical signs as yesterday. The right side is duller near the sternum than towards the shoulder. In the right supra-spinous fossa there is more crepitant roushus. Above the upper and inner angle of the right scapula near the nuclei the respiration is distinctly cavernous. It is louder in the left supra-spinous fossa than yesterday. Tongue is pretty clean. Is rather sick this morning. Bowels not open since the 26th. Has made $\bar{x}xxvj$. of urine; sp. gr. 1020. Reactions as yesterday.

30th.—The physical signs as before. The expectoration equally fetid; full $\bar{x}xij$. in the twenty-four hours. It is opaque, containing some dark blood in it here and there. There is no pain, even during a deep inspiration, in the chest. Pulse 100; rather full. Tongue slightly brown behind. Lips dry, but no thirst. Urine, sp. gr. 1016; very acid, with a trace of albumen. Bowels not opened. $\bar{R}$ Hydr. Chloridi, gr. iv.; Ext. Colocynth. co. gr. viij.; pil ij.; statim sumend. Haust. domest. mane.

June 2d.—The skin is hotter to-day; in the axilla, 100° F.; on the surface of the chest, 99°. The expression of countenance is unaltered. Expectoration equally fetid, and with the same appearances, amounting to $\bar{x}viij$. in the twenty-four hours. A portion of it, under the microscope, exhibited granular matter, broken-up pus- and blood-globules, some entire, but no trace whatever of fibres; bowels open once; pulse 96, pretty full; respirations about 26 or 27 in a minute; no pain or dyspnoea. The right side of the chest is still distinctly duller than the left, but probably, if anything, less so than before; but complete dulness does not reach lower than the second rib. Respiration still bronchial, less so near the sternum than it was, with slight mucous roushus, especially on coughing. The dulness behind, on the right side, extends to nearly the lower angle of scapula; it is clearer again below this, and duller below this again over the region of the liver. The respiration over the left supra-spinous fossa is weaker, but the expiration louder than it should be. There is also more dulness in the lower third of the same side, as compared with the middle third, and the vesicular murmur is generally weak: it is more resonant, however, as compared with the lower third of the right lung. Slept very well last night. Bowels not open since the 31st; 12 oz. of urine examined, sp. gr. 1018, acid; no albumen.

4th.—The breath is still very offensive, and the expectoration equally fetid, per-

haps more since yesterday, — about zv . in the twenty-four hours, less tenacious than before. Could not sleep last night, but cannot account for it. Tongue thickly furred; still brown posteriorly. His skin last evening was very hot, and nausea existed to such a degree that he could not drink his tea. Pulse 112, fuller; respirations 32 in a minute. Chest measures 28 inches round just above the nipple; both halves exactly equal; no pain in the chest; respiratory murmur very feeble in the lower part of the chest, almost wanting on both sides. Under the right clavicle it is less bronchial than before; left side moves more than the right. Behind, excepting that the respiration in the right supra-spinous fossa is less bronchial, physical signs as before. Has made 22 oz. of urine, sp. gr. 1019: that passed in the morning contained a trace of albumen. May get up for an hour or two daily. — R . Omittit Calcis Chlorinata; $\text{V.S. ad } \text{zviii}$; $\text{Ant. Tart. gr. ss. ex qua M. Pip. ter die}$.

The patient did not feel faint after the bleeding. Pulse fell to 100, rather jerking. The blood was both buffed and cupped; serum clear, sp. gr. 1030, and alkaline.

6th.—The chest measured high up, just below the clavicles, $26\frac{1}{2}$ inches round, and the left half was 14 inches; the right half, consequently, $12\frac{1}{2}$ inches; below the nipples, 28 inches; both sides equal. Placing one end of the tape on the spinous processes behind, and marking the middle line in front, the left side was found to expand three-eighths of an inch during inspiration, while the right only expanded one-eighth of an inch. Expectoration as before, but less fetid. Skin cool and moist over the chest. Cough about the same. Pulse 85. Respiration less bronchial superiorly, and very feeble inferiorly on both sides. Vocal vibrations quite as distinct on the right as on the left side. On snapping the chest with the finger, the irritability of the muscles was more apparent on the right than on the left side. Dulness continues greater under the right clavicle and in the right axilla. On taking a long breath after coughing once or twice, fine crepitation was indistinctly heard. Tongue still furred, but less brown. Has made 48 oz. of urine, sp. gr. 1016, acid; a slight precipitate by heat alone, taken up by nitric acid.

9th.—He is improving. Appetite better; skin cool; sleeps well; heart sounds as before; expectoration is only about zv . in the twenty-four hours, scarcely so purulent, rather tinged with blood here and there, but equally, if not more, fetid. The cough is not so troublesome, yet it still fits that sometimes last night. There is no pain or fever in the chest. The res

piratory murmur is less bronchial behind, half an inch below the middle third of the clavicle; opposite the sixth dorsal vertebra, about an inch on the left side, the respiration is distinctly bronchial, and the percussion yields a dull sound over the same part. In front, the physical signs as before. On the left side the respiration is loud, but does not amount to bronchial. Urine, sp. gr. 1015; no albumen.

11th.—Yesterday the expectoration was not more than xi . in the twenty-four hours; to-day it has increased to zv .: it is less fetid, however, more bluish in colour, and like mucus; there is, however, no pain in the chest. On a level with the nipple the chest measures 27 inches. The right and left halves are equal. Both sides expand equally, on gentle pressure, three-eighths of an inch. The respiration is much less bronchial, both in front and behind, on the right side, than it was, and the amount of dulness, as compared with the left side, is generally less marked, especially over the infra-scapular fossa, where there is very little difference: the respiration, however, in front, over the limited space before described beneath the clavicle on the right side, is still bronchial, with some gurgling occasionally. In the corresponding portion on the left side the respiration continues loud,—indeed, partaking somewhat of the bronchial character. Has made 40 oz. of urine, sp. gr. 1016. Reactions as before.

13th.—He was sick this morning, and threw up his breakfast. He has had nausea for several mornings back, but no actual vomiting. He sleeps well, and for the last eighteen hours has scarcely coughed at all. There is no headache. The expectoration is purely catarrhal, about zss . in the twenty-four hours; there is still some odour about it, but it is very trifling. Behind, over the right supra-spinous fossa, gurgling is evident, especially when he coughs, and the dulness remains, but both sides are more resonant than they were; there is large crepitation heard also in the lower part of the right lung. At the small portion before noticed, which was duller on percussion opposite the sixth dorsal, and where the respiration was bronchial, mucous ronchus only is heard. The first sound of the heart is still slightly prolonged. Pulse 92, in semi-erect position. His countenance looks altogether clearer, but he is much thinner. His calf, which on his admission measured seventeen inches round, now only measures 11. Tongue clean; appetite is good; bowels open. Has made 22 oz. of urine, sp. gr. 1017. Reactions as before. — R . Omittit Antim. Tart. B. Potass. ij. ; Inf. Gentian Co. , ziss . ter die. — lb. j. ; milk, Oj. ; middle diet. — The expectoration has rather in-

creased in quantity since last report: it is more puriform than it was, and yellow-coloured. Cough more frequent to-day than it has been the last two days, and the odour of the expiration is more fetid, but he complains of no pain whatever in the chest. The resonance of both sides, on percussion, is much greater, but still the right is dullest. Behind, the respiration is no longer bronchial, but feeble; in front it still partakes of the bronchial character as the right side, but much less so. The whole respiration is generally weak behind. Bowels open. Has passed 18 oz. of urine, sp. gr. 1012. Reactions as before.—*℞ Fiat Haust. cum Potass. Iodidi*, gr. iv.

18th.—The expectoration is perhaps less tenacious, but the mucus is more opaque, scarcely at all offensive, not more than *3ss.* in the twenty-four hours. On superficial percussion, there is no difference in the resonance of both infra-clavicular spaces; respiration still weak on both sides behind; in front it is still bronchial towards the innermost part on the right side, but much less so than before. Tongue clean; bowels open; appetite good. 30 oz. of urine passed: morning specimen, sp. gr. 1025, and evening specimen, 1013, acid. Reactions as before.

23d.—Since last report the patient is improving. The patient looks stouter, especially the face; no pain or sweating anywhere. Skin moist; no night perspirations; altogether he feels much stronger; pulse 100; expression of countenance placid; no headache or giddiness; organs of senses unaffected; sleeps well. The expectoration is scarcely fetid at all; *3ss.* in the twenty-four hours, as before. No pain or uneasiness about the chest. Behind, on strong percussion, the right side is rather duller than the left, but much less so than before. On superficial percussion, both sides are equally resonant; respiration 38 in a minute. The respiration is scarcely bronchial, but feebler than it is on the left side. The right interscapular region is, more distinctly, duller than the left, as also the right supra-spinous fossa; but in neither is the respiration bronchial or any gurgling heard as before. Vocal vibrations are fully as strong on the left as the right side. In front the dullness is greater on and above the clavicle, even on superficial percussion, than the left; and these same parts on the right side are duller than the infra-clavicular space on the same side. In other respects as before. Cardiac dullness reaches as high as the fourth, as low as the sixth rib=four inches; laterally, from a little to the left border of the sternum, two inches externally. First sound is still slightly prolonged. The liver extends from the middle of the fifth rib to the lower edge

of the eighth. Has made 30 oz. of urine; sp. gr. morning urine 1021, evening 1025, scarcely acid. Reactions as before.

25th.—The expectoration is purely mucous, but somewhat more fetid. Dulness under right clavicle is still greater on strong percussion than under the left. The cough is rather more troublesome. Has made 42 oz. of urine, morning specimen, sp. gr. 1020, and evening 1016, alkaline. In other respects as before.—*℞ Aug. Pot. Iodidi*, ad gr. v.; *Hirudines*, vj. *infra claviculam dextram*.

30th.—The leeches greatly relieved his cough. Since last report the expectoration has been rather more fetid than before, and his breath more offensive. In quantity, however, the expectoration is very trifling. There is scarcely any difference in the physical signs. Both infra-clavicular spaces are equally resonant on superficial percussion; on strong percussion, the right is duller, and this more marked on and above the clavicle. There is no bronchial respiration, but some mucous ronus. Posteriorly as before. He does not perspire at night; feels stronger, and looks fatter; appetite excellent. Pulse 108 in the erect, 96 in the semi-erect position, 88 in the recumbent.

July 2d.—He went out yesterday, walking as far as Camden Town and back again. He felt rather fatigued, but his cough is no worse to-day. The expectoration is for the first time no longer fetid, purely catarrhal, not more than *3ss.* in the twenty-four hours. The breath, however, is still fetid when he coughs. The right side is still duller on strong percussion: just at the apex of the right lung this dullness is most marked. The dulness under the clavicle, on strong percussion, is much less marked on the inner than on the outer third. On making him take a long breath, the right supra-clavicular depression expanded; that on the left side much less. Pulse 112 in the semi-erect position. 26 oz. of urine saved, sp. gr. 1017. Reactions as before.—*Rep. Hirudines vj. infra claviculam dextram*.

6th.—The patient looks thinner than on his first admission, but there is no appearance of emaciation. Altogether he feels stronger, and thinks he is growing fatter. Sleeps well, perspiring generally a little towards morning. No cough, except just a little in the morning. Expectoration purely mucous, not offensive, *3ss.* in the twenty-four hours. On looking at the movements of the chest in front, very little difference could be appreciated. In the supra-clavicular spaces, the right was not filled out as much as the left, and the left remained the longest full. On superficial percussion, both in front and behind, the

resonance was equally great. On strong percussion in front, more externally, the right infra-clavicular space was duller than the left. On and above the clavicle the dullness was more marked than on the left side, even on superficial percussion. Vocal vibrations equally strong on both sides; the first sound of the heart distinctly prolonged. Pulse 108 in erect, 96 in the semi-erect and recumbent positions. Respiration is weak behind; and in front, on the right side, the expiration is too loud, but not bronchial. No urine saved.

Discharged cured of the pneumonia.

9th.—The patient called to-day at the hospital to see Dr. Taylor. His general appearance was improved. Physical signs unaltered. His expectoration he supposed amounted to 3ij. in the twenty-four hours, and the cough did not trouble him at all. Bowels regular.

23d.—The patient called again to-day. The complexion was much improved; and he looked much stouter. He also felt stronger. Skin cool and moist. He had been working since the 18th at his trade, painting blinds, but not much, as the exertion fatigued him. His cough the last week or so had been rather worse, and the expectoration somewhat increased; about 3j. he supposed in the twenty-four hours. He had also expectorated some blood on the 20th. It came up several times during the space of a couple of hours, though he did not think it amounted altogether to more than a teaspoonful. It was of a florid red colour, and came up with a cough. Previous to the occurrence of the hæmoptysis he had been running quickly over a space of about 200 yards, and was much out of breath. This morning again, as soon as he got up, it came on again. It was very trifling in quantity, continuing for about two hours, and of the same florid colour. The tongue is somewhat furred and white. Pulse 108, in a sitting posture. No headache or giddiness. Sleeps well. Bowels regular. Appetite excellent. *Physical signs.*—The dullness on percussion in front appeared to be somewhat greater than before, and this was especially the case on and above the clavicle. The breathing was nowhere distinctly bronchial, but occasionally intermixed with coarse gurgling. The vocal vibrations also appeared to be somewhat stronger on the right than on the left side. Behind, the right side was also duller, especially over the supra-spinous fossa, but the infra-spinous was also somewhat duller. The breathing was nowhere bronchial, but generally weak. He stated that he had remarked that for the last week he had perspired at night much more copiously than before.

REMARKS.—This case resembles in many respects one published by Mr. Fearnside,

in his Fellows' Clinical Reports (*MEDICAL GAZETTE*, Nov. 8, 1844). As such, much in reference to the diagnosis need only be cursorily gone over.

The *diagnosis* was obscure. There was certainly evidence of consolidation at the apex of the right lung: thus, there was dullness on percussion, and bronchial, almost cavernous, respiration at this part. It was the immediate cause of this consolidation that was doubtful. It was accompanied with very fetid expectoration, the odour closely resembling that of gangrene. Now, fetid expectoration may be observed in the course of the following diseases:—gangrene, or pulmonary abscess, dependent on pneumonia, empyema, or abscess of the liver, bursting in the lung, bronchitis, or phthisis.

1. *Gangrene?*—Was there any pneumonia? It was true no cause of exposure to cold had been traced, but the patient had had albuminuria; nay, he had it on his admission. We know imperfect action in the kidneys will, by the retention of excrementitious and irritating matters in the blood, give rise to inflammation in weak organs. 2d. Moreover, when gangrene results in the course of pneumonia, we believe it is generally accompanied with albuminuria. The case of James Freeman (*Lancet*, 1846), and Mr. Fearnside's case, are both examples of this. In the latter the state of the urine is not given at the onset of the disease, but at the post-mortem the kidneys are stated to be congested and dark. We have noticed, however, this condition in one or two other cases. Inflammations, it may be added, in albuminuria cases are apt to be typhoid or adynamic in kind. 3d. There had been cough, and the expectoration originally tinged with blood. 4th. There had been a dull pain on the right side, increased by a full inspiration. The pain was, moreover, dull in character, and the pulse was slightly quickened. 5th. The expectoration was fetid. All these circumstances made it highly probable pneumonia existed. On the other hand, most of these symptoms, as we shall see, might have been produced by tubercles and bronchitis, with more or less local congestion. The expectoration had not been originally rusty, but of a florid red colour. The character of the expectoration is much insisted upon by authors, as pathognomonic of gangrene. Andral describes it as greenish, grey, and fetid. Laennec describes it as of a yellowish grey, verging on green, and fetid. Dr. Williams believes the odour can only be considered pathognomonic of gangrene when pneumonia is also shown to co-exist. Grisolle speaks of the expectoration in gangrene as of variable colour, sometimes brown, sometimes yellowish, sometimes of the colour of Spanish tobacco; at other

times of a greyish green, of a dusky black, or black character, mixed or not mixed with the ordinary rusty expectoration of pneumonia. Sometimes it seems to be made up of perfectly pure and red blood, but most generally black. In nearly all cases it is of a most repulsive fetidity. The above opinions show that the fetidity or appearance of the expectoration affords no sure index of pneumonic gangrene. In reference to Andral's opinion, founded as it is on one case (43), it is questionable, as from his own account the case appears to have been one of *abscess of the lung*, not gangrene. 2d. The expression of his countenance was perfectly natural. It did not present that peculiar hippocratic or collapsed appearance usually observed in gangrene. 3d. He was able to walk about; he felt pretty strong, and was actually walking about in the ward on the 29th; and this at a time when he was expectorating 3xii. of fetid sputa in the twenty-four hours: and he could speak well and strongly. None of these symptoms are usually observed in cases of gangrene; yet, it must be admitted, not invariably. Patients afflicted with gangrene of the lung may walk about, and talk loudly within one or two hours before death. Such a case occurred in the hospital under Dr. Williams, in 1843; and Andral's case 43 (if it be one of gangrene), is another example of the same kind. Such instances, however, are rare. 4th. It was believed by some, that the odour in this case, though very bad, was not so unsupportably fetid as in gangrene. 5th and lastly. Under the microscope, when the expectoration was examined on the 31st May, it exhibited no trace of fibres, as is usual in gangrenous expectoration. These last circumstances were, therefore, opposed to the existence of gangrene.

II. Fetid expectoration may arise from abscess of the lung. According to Grisolle, abscess of the lung is usually observed in the superior lobes. 2d. The expectoration is usually very abundant. 3d. It is also commonly very fetid. 4th. The cavernous respiration and coarse gurgling, subsequently with the dulness on percussion at the apex of the right lung, might be explained by the existence of an abscess. In all these respects the condition of the patient agreed with this diagnosis.

But, on the other hand, this affection is very rare. 2d. It is usually observed in persons debilitated by age, prior disease, misery, or privations. The operation of such causes could not be traced in this case. 3d. So serious a lesion is usually, if not always, accompanied with high fever, and much constitutional disturbance. Now, excepting slight headache and thirst, the patient Plummer had been remarkably free from pyrexia. Thus, while it could not

be positively denied that if pneumonia existed abscess might have also been present, still, generally, the probabilities were opposed to this view.

III. Fetid expectoration may arise from empyema where the pleura and lung give way, and the pus escapes in the bronchi. In this case, however, it was not at all likely such a lesion existed. The only manner in which this could have occurred here involved the supposition that it had been circumscribed in this position by adhesions; but even this wild speculation was negated by the greater amount of vocal vibrations over the dull portion, whereas in empyema they are weaker, or absent altogether.

IV. Fetid expectoration may arise from abscess of the liver bursting into some of the bronchi. This opinion is at once negated by the entire absence of acute symptoms in the liver. In such examples the organ is usually much enlarged. In this case the organ certainly reached one finger below the margin of the ribs; but this enlargement was too trifling in amount, and might simply result from slight congestion.

V. Fetid expectoration may arise from bronchitis. Dr. Taylor has known several cases in which the fœtor of the sputa was extreme. Andral's case 13 is an example of this kind. Before his admission there had been bronchitis,—as early as the 15th May his expectoration had been frothy; and on his admission there was also large crepitation heard, but the consolidation at the apex was due to some other cause. Though bronchitis, therefore, existed, it was accompanied by some other lesion.

VI. Fetid expectoration may result from certain changes occurring in a tubercular cavity. Where such a cavity is large, and where a portion of the lung during the ulcerative process may become detached and fall in the cavity, under the influence of the warmth, air, and moisture of the cavity it may rapidly pass into putrefaction, and thus give rise to the fetid expectoration. Such an instance is recorded in Andral's *Clinique Médicale*, p. 374, of a phthisical patient, who, after repeated attacks of hæmoptysis, at last, in one of these expectorated a dark liquid mass like blood, but of a brown red colour, which exhaled a fetid odour like gangrene. The following day the expectoration was of a very dirty grey colour, and as repulsive an odour as before; but on the following day the odour and colour of the sputa completely disappeared. To this view, however, in the case of Plummer it was opposed that the present attack was acute, that he had not been liable to cough or night sweats before, nor was it distinctly ascertained that any of his relations had died of phthisis. On the other hand, one

of his brothers had died of *tubercles mesenterica*, a tubercular affection. His grandmother had been liable to cough all her life. He had lived in an exceedingly damp and close room. Then, although the attacks had come on suddenly, there had been very little of any general fever, which, though not invariably the case, is generally present in pneumonia. The position of the consolidation was that of tubercular deposits. Pneumonia of the upper lobe, on the contrary, is rare in adults. The liability to night sweats since the attack, the common case where tubercles exist. The bright florid red colour of the blood expectorated at first; in pneumonia, when it occurs, it is usually more rusty in appearance: all these were circumstances favourable to the existence of tubercular deposits.

But the fetid sputa does not occur in phthisis, except where there is a cavity. Now, was there a cavity in this patient? There was strong bronchial and cavernous respiration, and some large crepitation, amounting to gurgling as the case progressed. But neither of these signs are pathognomonic of a cavity. 1st. Both may be present in the case of a dilated bronchus. 2d. Where there is a circumscribed portion of consolidated lung near the surface. 3d. According to Dr. Williams, cavernous respiration may be simulated by transmission of tracheal respiration through a portion of the apex of the lung well consolidated (Cl. Lect. on Chas. Lee), especially where the consolidation is internal, near the trachea, as in this case; so that the observation made by Andral is perfectly correct, that there are no signs of a phthisical cavity which may not exist in its absence. There might, therefore, have been a cavity, but it could not be positively asserted. Considering, therefore, the weight of evidence on all sides, it appeared highly probable that there was tubercle, with or without a cavity. 2d. There was also bronchitis; and 3d, there might be pneumonia.

Progress and treatment.—On his admission, as the factor of the breath was the chief source of annoyance to the patient, chloride of lime only was given in small doses internally, attention being paid to the bowels, which were at the same time rather constipated. The only change observed under this course of treatment was that the expectoration diminished sensibly in quantity. On the 3d June, however, some exacerbation in the symptoms was observed. The pulse had risen to 110, and was stronger and fuller.

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physical signs were, however, unaltered. The urine also seemed to indicate increased dyspnoea; the morning urine contained a trace of albumen. The case was therefore supposed to be one of pneumonia, and treated as such. Tartar emetic was now given, and the blood drawn was both cupped and bled, denoting the presence of inflammatory fever. On the 6th the expansion of the right side of the chest was observed to be less than that of the left, and fine crepitation was also detected in the axilla of the right side; both, circumstances confirmatory of the presence of pneumonia. On the 7th another spot of pneumonia was observed, near the 7th rib, partly on the right side. From this time, however, the improvement began; the dulness on percussion becoming less obvious on the right side; the cough diminishing, the expectoration becoming less copious and less offensive. The dulness, however, quite at the apex of the right lung, persisted in the end; confirmatory of the supposition that tubercles existed. The progress of the case also proved that pneumonia had existed. Under the use of the leeches and the iodide of potassium given, the greater part of the consolidation below the clavicle certainly had disappeared. This could only be due to pneumonia, and pneumonia which had reached its second step, since bronchial, almost cavernous, respiration had been heard. It is true occasionally, pneumonia in the first stage may give rise to bronchial respiration. We are not aware, however, that it can produce cavernous respiration.

The presence of tubercle was completely proved by the recurrence of the hæmoptysis, and rather the increased amount of dulness over the right clavicle and hectic symptoms, subsequently to his leaving the hospital. Whether the fetid expectoration originally was due to a cavity or bronchitis, is not clear. Certainly, after the disappearance of the pneumonia, though the apex of the right lung continued dull on percussion, no signs of a cavity were subsequently made out.

Causes. 1. *Predisposing.*—Perhaps hereditary tendency, and living in a close room, predisposed him to the occurrence of the tubercles. The presence of the latter would predispose him to pneumonia.

2. *Exciting causes.*—Bouillaud maintained exposure to wet and cold could be traced in all cases of pneumonia as an exciting cause. Chomel, Grisolle, and Louis, believe that pneumonia might be induced by other causes than cold or exposure. Indeed, Grisolle believes the operation of the latter agents can only be traced in one-fourth of the cases of pneumonia; i. e. out of 409 cases, in 101 only could the influence of cold as an exciting cause be traced. Hence cold is rather an uncommon cause.

In the present case it did not appear to have caused the pneumonia.

2. We have seen in the case of Edwards and others, that disease of the kidney may, by the retention of excrementitious matter, so poison the blood, as by its irritating properties it shall excite inflammation in several parts of the body, especially predisposed or debilitated organs. Was there any evidence of disease of the kidney in this case? While an out-patient under Dr. Walshe, it appeared in the outset of the

disease that his urine had been very dark coloured, like dark blood. Of this, however, we have no other evidence than his own observation. On the 23d May his loins were tender on pressure, and the urine was albuminous. The leeches applied to the region of the kidneys, however, and the diuretics then given, seem to have removed all pain in this region. It remained albuminous more or less up to the 4th June. The following were the characters of the urine during his admission:—

Date.	Reaction.	Albumen.	Sp. gr.	Ounces passed in 24 hours.	Diet.	Microscopical characters.	Quantity of solid matter excreted in 24 hours.
May 28	Acid.	Some.	1015	20	Low.	Hairs and epithelium particles.	—
" 29	Do.	Ditto.	1020	36	"		821
" 30	"	Trace.	1016	—	"		—
" 31	"	Do.	1020	40	"		912
June 2	Slightly acid.	None.	1017	12 saved.	"		—
" 4	Acid.	Trace.	1010	22	"		246
" 5	Slightly acid.	None.	1017	12 saved.	"		—
" 6	—	Ditto.	1016	48	"		840
" 7	—	Do.	1021	50	"		1198
" 9	Acid.	"	1015	—	"		—
" 10	"	"	1012	—	"		—
" 11	"	"	1016-20	40	"		—
" 12	"	"	1015-17	—	"		—
" 13	"	"	1017	30	"		—
" 14	Slightly alkaline.	"	1015	20	Middle; milk, Oj.; bread, lbj.		580
" 16	Slightly acid.	"	1012	18	"		340
" 17	Acid.	"	1010	54	"		248
" 18	Morning, alkaline; evening, acid.	"	1013-25	32	"		604
" 19	Slightly acid.	"	1010-11	44	"	A great many hairs and epithelium scales.	547
" 20	Do.	"	1010-11	46	Full.		—
" 21	—	—	—	36	"		572
" 23	Slightly acid.	None.	1021-25	30	"		—
" 24	Acid.	Do.	1020	—	"		—
" 25	Alkaline.	"	1016-20	42	"		—
" 26	Acid.	"	1017	18 saved.	"		618
" 27	"	—	1012-30	24	"		—
" 29	"	None.	1016-17	32	"		—
July 1	"	Do.	1012-20	36	"		502
" 2	"	"	1017	26	"		—
" 3	Very acid.	"	1020-28	36	"	Epithelium scales.	643
" 4	Do.	"	1025-20	26	"		—
" 5	Do.	"	1015-30	20	"		—

N.B.—(Average quantity of solid matter excreted, according to Prout, 684, and Becquerel 608. The quantity in the above table is only given where the exact amount of urine, with the specific gravities of all specimens passed in the 24 hours, was known). We observe, from the above table, that the quantity excreted was generally about the average: so far, no permanent disease of the kidney existed. The albumen was only observed for a short time, and the blood globules, organic globules, and tubes, usually observed in Bright's disease, were absent. The specific gravity was generally low.

On two occasions it was decidedly alkaline; on one slightly so. Was this accidental, due to partial decomposition, by the temperature, ingesta, or chronic nephritis? Of the two latter there was no other evidence, and the high temperature of the season was probably the cause of the alkalinity.

Thus, so far as evidence is afforded us during his stay in the hospital, we have no reason to conclude there was disease of the kidney going on. That, however, prior to his admission, there was congestion of the kidney, is highly probable. If there was congestion of the internal organs, which the state of the liver on admission seemed to render probable, the cases already published will explain how the temporary suspension of the renal secretion might have excited the pulmonary disease. Connected with the albuminuria, the brown tongue posteriorly was noticed in this as in Whitebread's case.

Prognosis on his admission was obscure, for the same reason that the diagnosis was not very clear. His youth, and the entire absence of fever anxiety, were symptoms highly favourable. On the other hand, the coexistence of albuminuria, when nothing very evident as to its cause appeared, was an unfavourable complication. Was the disease abscess in the lung, the prognosis was bad, the result in such cases being usually fatal. Was it tubercle, it was probable he might survive the present attack.

The progress of the tubercular disease upon him since his departure from the hospital, coupled with the necessary exposures to the vicissitudes of temperature, and probable privations of one in his state of life, with perhaps the very nature of his occupation, are unfavourable circumstances, and the probability is, that unless he takes great care of himself, ere long the disease may pass on to its third stage, and death result.

Original Communications.

SUPPLEMENTARY STATISTICS

OF

CHOLERA IN PLYMOUTH IN 1849.

By DR. W. HAMILTON.

A most important and valuable contribution to medical and statistical science has recently issued from the public press of Plymouth, and merits a much more extended circulation than that afforded by the limited population of a provincial town.

It is a large sheet, exhibiting, in a succession of tables, the "Statistics of the Cholera in Plymouth, during its prevalence in 1849, compiled by J. Wyatt and H. H. Heydon, Registrars of Births and Deaths," upon whose untiring zeal and industry it reflects the highest credit.

The tables which it contains are seven in number, arranged as follows:—1st. A summary of births and deaths, illustrating the effect of cholera upon the population in a clear and intelligent manner. 2d. Fluctuation of population. 3d. Daily mortality from cholera, from the 4th of July to the 8th of November, 1849, a period of 127 days, or nearly 19 weeks. 4th. Mortality from cholera of each sex, at different ages, with totals and centesimal proportions for each district. 5th. Deaths from cholera, comprehending the four principal periods of human life, compared centesimally with the mortality from all causes since the census of 1841. 6th. Table of daily mortality in the various localities, with the totals in each street: this is a most valuable table for the illustration of the sanitary condition of the several districts of the town, and comprises the mortality of no fewer than fifty localities in the parish of St. Andrew, and forty-seven in that of Charles, forming an aggregate of ninety-seven; which, notwithstanding the local interest which it possesses, is too long to be introduced into a paper like the present. 7th. The statistics of cholera in 1832 compared with 1849. Such are the contents of this highly important sheet, the publication of which enables me to complete the history of cholera, and complete the details commenced in my

The duration
tracted in P

days, or 36 days beyond that formerly assigned to it, and the totality of its victims has been 819, or about one-tenth more than the number formerly

given. The first two of the tables published by the registrars conjointly illustrate its effects during this lengthened invasion.

	District of		Borough.	Mortality in 4 months from	
	St. Andrew.	Charles.		Cholera per cent.	All causes per cent.
From cholera	553	266	819	2.06	2.97
From other causes . .	251	107	358	or 46 34	
Total from all causes .	804	373	1,177		
Births registered in 4 months	314	177	491	Living to 1 death.	
Excess of deaths . . .	490	196	686		

Enumerated at the census in June, 1849.	Increase from natural causes in 8 years.	Estimated population on the 1st of July, 1849.	Decrease from cholera in 4 months.	Diminished population on 1st Nov. 1849.
36,527	3,044	39,571	686	38,885

From these two tables we learn that while the population advanced only 8.3347 per cent. in eight years, or at the mean rate of 1.0418 per cent. per annum, it has been diminished in the brief space of about one thirty-second part of that time to the extent of 1.7335, or nearly one and three-quarters per cent. by cholera; being nearly at the rate of 7 per cent. per annum, or about 54 per cent. for the entire period of eight years: a rate of mortality which would have swept away in that time nearly thrice

the amount of population which existed in the borough on the 1st of July last. But, while such was the amount of mortality from cholera alone, the aggregate arising from all other causes, exclusive of cholera, did not reach to 1 per cent.

The table of mortality from cholera of each sex, at different ages, varying from that given in my former paper, from the prolonged invasion of the pestilence, and the additional number of victims, renders it necessary to repeat it here.

Mortality under each of the following ages:—

Sub-district of		1	2	10	20	30	40	50	60	70	80	90	100	Total.	Centesimal proportion of sexes.
St. Andrew.	Males . .	12	11	66	17	28	38	39	30	18	11	1	1	272	49.17
	Females .	11	17	61	27	35	39	33	22	21	11	2	2	281	53.83
	Total .	23	28	127	44	63	77	72	52	39	22	3	3	553	100
Charles.	Males . .	12	9	27	5	10	17	9	15	12	5	1	—	122	46.86
	Females .	5	12	26	17	18	19	14	10	14	7	2	—	144	54.14
	Total .	17	21	53	22	28	36	23	25	24	12	3	—	266	100
Borough.	Males . .	24	20	93	22	38	55	48	45	30	16	2	1	394	48.10
	Females .	16	29	87	44	53	58	47	32	35	18	4	2	425	51.90
	Total .	40	49	180	66	91	113	95	77	65	34	6	3	819	100.

We here see how much more severely females suffered from cholera than males, the excess of the former amounting to 2·80, or nearly 3 per cent. In the first year of existence, indeed, the mortality among the males exceeds that of the females by 0·98, or nearly 1 per cent.; but between 1 and 2 we find a balance of 0·49 or nearly half per cent. against the females. Between the ages of 10 and 20 again, the balance is in their favour to the extent of 0·740, or nearly three-quarters per cent. Between the ages of 30 and 50, the female mortality exceeds the male by 2·198 per

cent.; and between 60 and 100 the excess on the part of the females amounts to about 1·85 per cent. The greatest mortality of both sexes appears to have been between the ages of 10 and 20, when it amounted to 180, or near 2 per cent.

But the injurious effect of cholera on society is still more strikingly illustrated by the following table, in which the deaths from cholera, under ages comprehending the four principal periods of human existence, are compared centesimally with those from all causes since the census of 1841:—

	Centesimal proportion of deaths during the				Centesimal amount of	
	Last eight years from all causes.		Summer of 1849 from cholera.			
	Number.	Cent. prop.	Number.	Cent. prop.	Increase.	Decrease.
Under 10 . .	3,698	45·995	299	82·84	—	28·59
10 to 20 . .	330	4·10	66	8·05	96·84	—
20 to 60 . .	2,054	25·547	376	45·90	79·71	—
60 to 100 . .	1,958	24·35	108	13·18	—	13·18
	8,040		819			

We here see that while the centesimal proportion of deaths from cholera falls short of the mortality from all causes by nearly 17½ per cent. under 10 years, and by about 11·17 per cent. between 60 and 100; from 10 to 20, when youth is advancing to manhood, and beginning to be a profitable member of society, the mortality from cholera exceeds that from all causes during the eight preceeding years by 3·95 per cent.; and during the meridian of life, from 20 to 60, when the individual, attaining the full maturity

of his faculties, mental and corporeal, has become an important constituent of society, as the head perhaps of a numerous family, dependent upon his labours for their daily subsistence, the excess of mortality from cholera amounted to no less than 20·85 per cent. The next table, which is not included in those published by the registrars, throws somewhat additional light upon the subject, by exhibiting the mortality from cholera in each sex in the two middle and two extremes of life.

Deaths from Cholera at the Middle and Extremes of Life.

Periods of Life.	Deaths from cholera.		Males.		Females.	
	Number.	Cent. prop.	Number.	Cent. prop.	Number.	Cent. prop.
Middle	442	53·97	208	25·4	234	28·57
Extremes	377	46·03	186	22·7	191	23·32
Total	819		394		425	

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ried off 819
early 54 per

cent. were in the prime of life, and 377, or 46 per cent. were in the helplessness of infancy, or the imbecility of age. Of the former, 208, or above 25 per cent.

were males, and 234, or nearly 29 per females; leaving only 186 males, or about 23 per cent., and 191 females, or about 23½ per cent., in the springtide and wane of life.

This is an important feature in the character of cholera in Plymouth at least, which, if confirmed by experience elsewhere, will go far to correct the general belief of infancy and age furnishing the largest proportion of victims; a belief shared, as I am informed, by Dr. Shapter, who states it (unless I am misinformed) as a fact in his history of the epidemic at Exeter; but upon what grounds I am ignorant, having failed in my endeavours to borrow the work, and the price being too high for the mere purpose of reference. That the popular opinion is incorrect, as far as Plymouth is concerned, the tables just given abundantly prove, furnishing matter for grave and melancholy reflection to the political economists no less than the philanthropist. Eight hundred and nineteen of those classes that earn their daily bread by the sweat of their brow and the toil of their hands, have been swept from the face of the earth; of which number, more than half were in the enjoyment of life, full of health, strength, and vigour, able to contribute their quota to the welfare of society; while of those who were immediately dependent upon them for support by far the smaller proportion was taken. The pillars of the social fabric have been overthrown by the ruthless fury of the desolating flood, which it will take another generation to replace. Who can supply to the desolate orphans the parents of whose protection they have been deprived? Who can supply to the lone widow the husband upon whom she leaned for support? Who can replace to the widower the loss of her who made his home cheerful and happy? Who can restore to age, tottering on the brink of the tomb, the children who steadied his feeble steps, and ministered to his few remaining wants?

This table furnishes the correct amount of the unregistered deaths from cholera during the three months of July, August, and September, which, in the absence of any correct data, was assumed in my former paper to have been 25. The true mortality arising from cholera during these three months we now learn to have been—for the district of Saint Andrew 529, or 64·59 nearly per cent. ;

for that of Charles 235, or 28·69 per cent. ; and for the entire borough 764, or about 93·28 per cent. of the entire mortality registered as having arisen from this cause. For the two remaining months it was—for St. Andrew only 24, or about 2·93 per cent. ; for Charles 52, or nearly 6·35 per cent. ; and for the entire borough 764, or about 9·28 per cent. (see Table, following page.)

From causes which it is not the business of the present paper to investigate, these numbers differ from those which are given in the Registrar's notes appended to the third quarterly report of the Registrar General, in which I find it stated, at pages 66 and 67, that the number of deaths from cholera which were registered during that quarter, were 717—viz. 482 in the parish of St. Andrew, and 235 in that of Charles. These numbers, according to the note of the Registrar for the district of Charles, require a slight correction, by the addition to the returns from him, of 25 belonging to his district, who having been removed to the hospital within the parish of St. Andrew, died there, and were registered as belonging to that division. The Registrar's returns thus amended, give for the number of deaths for St. Andrew, 457, or about 55·799 per cent. of the entire number of deaths from cholera; 260, or 31·746 per cent. for Charles; and 717, or 87·545 per cent. for the Borough, in place of 529 for St. Andrew, 235 for Charles, and 764 for the Borough; being a deficiency of 47, or nearly five and three quarters per cent below the truth. It is true these deaths will be found included in the registration for the current quarter; and hence it may appear, to the superficial inquirer, that their omission in the quarter to which they legitimately belong is perfectly immaterial. But in forming the statistics of any epidemic, it is desirable, for the purpose of comparison with any previous visitation, or with any which may succeed, to have all the circumstances connected with it correctly arranged under their distinct periods, without assigning to any one or more a larger proportion than is its due. From the table under consideration, we see that the legitimate mortality of October and November conjointly, was 55, or 6·7155 per cent. of the whole; the numbers being 52, or 6·3492 per cent. for October, and 0·3663 per cent. for November. But, by swelling the October

Daily Mortality from Cholera, from the 4th of July to the 8th of November, 1149.

Days of the month.	JULY.			AUGUST.			SEPTEMBER.			OCTOBER.			Nov.	Days of the month.
	St. Andrew.	Charles.	Borough.	St. Andrew.	Charles.	Borough.	St. Andrew.	Charles.	Borough.	St. Andrew.	Charles.	Borough.	St. Andrew.	
1	—	—	—	4	—	4	4	2	6	1	4	5	—	1
2	—	—	—	3	—	3	4	6	10	1	1	2	—	2
3	—	—	—	2	2	4	6	5	11	1	—	1	2	3
4	1	—	1	4	—	4	4	1	5	—	5	5	—	4
5	—	—	—	2	1	3	8	3	11	2	1	3	—	5
6	—	—	—	7	—	7	9	3	12	—	1	1	—	6
7	1	1	2	6	2	8	8	2	10	1	5	6	—	7
8	3	—	3	4	—	4	7	2	9	3	3	6	1	8
9	5	—	5	7	—	7	6	2	8	1	—	1	—	9
10	9	—	9	10	—	10	9	2	11	—	3	3	—	10
11	4	3	7	15	1	16	7	3	10	3	2	5	—	11
12	6	—	5	20	1	21	7	3	10	1	—	1	—	12
13	8	1	9	12	2	14	5	—	5	1	—	1	—	13
14	9	1	10	10	1	11	3	2	5	1	—	1	—	14
15	9	2	11	13	—	13	5	5	10	—	3	3	—	15
16	7	—	7	10	3	13	4	23	27	1	1	2	—	16
17	7	—	7	4	—	4	5	21	26	—	—	—	—	17
18	14	1	15	13	3	16	2	27	29	2	—	2	—	18
19	13	—	13	20	1	21	3	12	15	—	—	—	—	19
20	4	—	4	7	2	9	3	7	10	—	1	1	—	20
21	6	1	7	9	2	11	4	10	14	—	—	—	—	21
22	4	2	6	8	6	14	7	3	10	—	—	—	—	22
23	5	—	5	4	3	7	2	6	8	1	1	2	—	23
24	2	—	2	7	1	8	4	7	11	—	—	—	—	24
25	3	2	5	8	3	11	3	1	4	—	—	—	—	25
26	3	—	3	10	2	12	5	6	11	—	—	—	—	26
27	6	—	6	7	1	8	1	1	2	—	—	—	—	27
28	3	—	3	7	5	12	1	3	4	—	—	—	—	28
29	3	1	4	9	1	10	2	3	5	1	—	1	—	29
30	2	—	2	8	3	11	1	3	3	—	—	—	—	30
31	3	—	3	1	1	2	—	—	—	—	—	—	—	31
Total.	139	15	154	251	47	298	139	173	312	21	31	52	3	Total.

returns by the addition of the 47 deaths not previously registered, the per centage of mortality is preternaturally raised for that month to above 12 per cent beyond its just level. I do not, by this, mean to cast the slightest reflection upon those to whom the care of the registration is entrusted; by the whole of whom it has been conducted with the utmost zeal and fidelity; but merely to point out some slight imperfection in the working of the system, for which they are in no way responsible, but which it would be desirable to have amended before any future emergency arises. The following table, from the returns of the births and deaths registered during the five months of cho-

lera, with the movement of the population, as estimated from the natural increase or decrease:—(see next page.)

This table, however, notwithstanding the accuracy of its totals, is inaccurate in the columns of mortality in both the districts of Charles during the three months of the intensity of cholera,—Charles requiring an addition of 25, and St. Andrew's a deduction of the same amount, for deaths, in the hospital, of that number of parishioners belonging to the former. This inaccuracy might be avoided by having two books of entry, one for the patients belonging to each district: but as this inaccuracy does not affect the general returns of the Borough, its correction is of less

Summary of Births and Deaths during the Five Months of CHOLERA.

	ST. ANDREW.				CHARLES.				BOROUGH.				Movement of Population.
	Births.	Deaths.	Diff ^{erence} .		Births.	Deaths.	Diff ^{erence} .		Births.	Deaths.	Diff ^{erence} .		
July . . .	84	145	- 61		42	38	+ 4		126	183	- 57		1st July . . . 39,571
August . .	61	279	-218		48	78	- 30		109	357	-248		1st August . . 39,514
Sept. . .	67	251	-184		52	199	-147		119	450	-331		1st September . 39,266
October .	102	127	- 25		35	57	- 22		137	184	- 47		1st October . . 38,935
Nov. . .	79	48	+ 31		44	26	+ 18		123	74	+ 49		1st November . 38,888
Sum . .	393	850	-457		221	398	-177		614	1248	-634		1st December . 38,937
Mean . .	78.6	170	91		44.2	79.6	35.4		122.8	249.6	122.8		Sum . . 236,111
													Mean . . 39,185

importance. But there remains yet another, the extent of which is disclosed in the preceding table, but which, not having been ascertained prior to the close of the registration of the last quarter, taints to that extent the registration of the four first months in this table. This error, we have already seen, amounts to 47, or nearly 5.75 per cent. of the entire mortality from cholera.

I have not the means, without taxing the labours of the registrar for the St. Andrew's district beyond their fair ex-

tent, of distributing this excess of un-registered mortality among the months to which it belongs in their legitimate proportions; but, assuming that, as the number of deaths from cholera in that district was greater in August, and equal in July and September, two, the balance of the division of 47 by 3, belongs to the former, and, deducting the entire number of 47 from the registered mortality for October, we shall have a tolerably correct statement of the monthly mortality as it actually took place. The following table exhibits the results of these corrections:—

Corrected Summary of Births and Deaths in PLYMOUTH.

	ST. ANDREW.				CHARLES.				BOROUGH.			
	Births.	Deaths.	Diff ^{erence} .		Births.	Deaths.	Diff ^{erence} .		Births.	Deaths.	Diff ^{erence} .	
July . . .	84	160	- 76		42	38	+ 4		126	190	- 72	
August . .	61	286	-225		48	78	- 30		109	374	-265	
Sept. . .	67	266	-199		52	199	-147		119	465	-346	
October .	103	80	+ 23		35	57	- 22		137	137	—	
Nov. . .	79	48	+ 31		44	26	+ 18		123	74	+ 49	
Sum . .	393	850	-457		221	398	-177		614	1248	-634	
Mean . .	78.6	170	91		44.2	79.6	35.4		122.8	249.6	126.8	

While the births, during the three first months included in the table, fell short of 1 per cent. of the population as it is presumed to have existed on the 1st of July, the mortality during the same period reached to 1087, or 2.75 per cent., being to the births nearly in the proportion of 3 to 1, or more exactly as 2.65 to 1.

Of this almost unprecedented amount of mortality, 764 deaths, or nearly three-fourths (73·874 per cent.), arose from cholera, leaving but 273, or 26·326, for the remaining mortality from all other causes. Large, however, as this amount of mortality is, it will be found higher than the mortality during the corresponding period in 1832. The estimated population of that year was 31,825,—a number more probably over than under the truth, being obtained by the addition of the annual average of the whole decennial period between 1831 and 1841, of which number 711 were carried off by cholera between the 10th of June and the 13th of September, being 2·248, or within a minute fraction of 2½, per cent. Out of a population of 39,571 on the 1st of July last, the victims to cholera numbered between that day and the 1st of October, as we have just seen, 764, or 1·93 per cent. being above one-fourth per cent. less than upon the former occasion. Even with the addition of the twenty-eight days, during which the ravages of cholera were protracted in the present year beyond their duration on the former occasion, the mortality was only augmented by 55, making an aggregate of 819, or 2·094797, an almost inappreciable fraction, amounting at the most to one-tenth beyond 2 per cent., and still 0·15304 per cent. below the level of 1832. This mode of comparison is the one open to the fewest objections, as it is above the suspicion of error, except from the inadvertence of the calculator, or the registration of deaths as the result of cholera which arose from other causes. If such error has crept in, the registrars are at least free from blame, as they can only take the certificate of death as it is furnished to them by competent authority. Were we to measure the virulence of the malady by the number of cases reported to the Board of Health, we should undoubtedly obtain a far lower per centage of mortality; but this mode of computation would lead us into far greater error, from two causes: first, from the omission, in the reports to the Board, of all those cases the treatment of which was not conducted at the expense of the public: hence the returns are deficient by that precise amount. The second is very gross, and multitudes of persons are not honestly re-

far this opinion is consonant to fact, I am without the means of deciding. Here, then, are two abundant sources of error, acting, it is true, in opposite directions: the one of augmentation, the other of diminution; while the registry of deaths embraces all classes alike, and its records hardly admit the possibility of dispute. The estimated amount of population, not including those incessant fluctuations to which society is perpetually subject from the effects of immigration and emigration, is more probably below than above the truth, being based solely upon the excess of births beyond the mortality. Any error arising from this cause is evidently to the advantage of 1832, the population of which, being deduced from the annual average of the whole term, necessarily exceeds the truth in probably a larger degree than the other falls short of it. Hence it is clear that population and mortality are the only elements which can be admitted into our comparison with the smaller risk of inaccuracy; and, measured by these standards, the malady of 1849 exhibits a decidedly mitigated character. But there is yet another point of comparison, which, although not perhaps equally free from objection, merits at least a passing notice, leaving the deductions to the judgment of the reader. In 1832, instances repeatedly occurred of persons in the apparent enjoyment of the most perfect health dropping down without warning in the streets, and, when taken up, being found to have passed with a terrifying rapidity into the unknown regions of eternity. Friends parted at night in the confidence of hope, one or other of whom received his summons in the gloomy silence of the night, and the morning dawned upon a breathless corpse. But not only was the dread of the malady heightened to a most painful degree by the suddenness of its attack, and the brevity of its duration, but the victim was not allowed to enjoy a peaceful and painless passage to the grave: cramps of the most appalling character racked every portion of his frame, and the tortures of the Inquisition conducted him to the repose of death. Such deplorable circumstances were of comparatively rare occurrence in the recent outbreak; and, but for the enormous amount of its mortality, and an inexplicable something which distinguished it from all those epi-

demics with which modern experience is familiar, we might have been disposed to question its identity with the scourge of 1832.

Among the causes which may perhaps be assigned for this diminished mortality is the steady advance which the disorder made across the continent of Europe for so long a period before it reached our shores; by which means the public mind, while impressed with a thorough conviction of its ultimate arrival, became familiarized to the danger, and less alarmed at its approach; to which may be added a growing conviction of the importance of prompt attention to the premonitory symptoms, and combating them by a rational course of treatment; without regarding the various and often incongruous nostrums which ignorance or credulity suggested. Could we by any possibility obtain the full particulars of every case which occurred either in 1832 or 1849, I am convinced that in at least 99 per cent. of them, if not in the totality, it would be found that ample warning had been beneficently given, and fatally neglected; and that even those terrific deaths which appalled the public mind in 1832 by their apparent occurrence, without any known warning, in the streets of our borough, had been preceded by such a derangement of the intestinal canal as was sufficient to rouse the attention of the most thoughtless; but these warnings were fatally neglected, and the tragedy was allowed to reach its closing scene before danger was apprehended or precautions adopted. I recollect hearing at the time of a remarkable case of rapid death from cholera which was clearly traceable to such neglect. A professional gentleman of high respectability, belonging to the law, who resided in one of the most airy streets of the town, in the immediate vicinity of the Theatre, Athenæum, and Hotel, had been walking with a friend in front of his residence to a late hour, in the enjoyment, as he believed, of rude health, and little suspecting that the number of his hours was so nearly run out, and that the hand which he shook at parting was shaken for the last time: but hardly was the door closed which shut him in from his friend,—hardly had the sound of that friend's receding footsteps died away in the distance,—before he dropped in the hopeless agonies of dissolution close

within his own hall door; and, long before the morning dawned, he slept the sleep of death. In this case, as I suspect in thousands of others, diarrhoea had subsisted for nearly a month, which timely remedies could hardly fail to have arrested before the catastrophe became inevitable.

In 1832 the invasion took place with a suddenness which magnified the panic it created, while erroneous ideas of the danger of contagion paralysed exertion, and thus added to the numbers swept away by the torrent of mortality.

On the question of contagion, the evidence appears to be so nicely balanced as to render it difficult to arrive at any satisfactory conclusion. Which-ever way the question may be ultimately decided, there can be no doubt as to the propriety of reasonable precaution. The hope, however, of excluding cholera from our shores by the rigour of quarantine regulations has been proved, by sad experience, to be utterly fallacious; and even were it otherwise, the evils of the remedy to a nation whose prosperity, like ours, is based upon commerce, far more than outweigh the problematical advantages anticipated from it. The danger of contagion is not lessened by the interval of seclusion, but by the free exposure of the suspected goods and people to the sanitary influence of light, heat, and ventilation. The churchyard of St. James's, at Bristol, the recipient of the victims of the plague, had been closed for above a century, when the reopening of the ground, for the interment of a victim, let loose anew the imprisoned demon to scourge the unsuspecting inhabitants.

Living, as we are, upon a small and circumscribed spot of earth, with a population advancing with the most gigantic strides, commerce and manufactures alone can furnish food and employment for our redundant numbers. As a matter of self-preservation, therefore, we must fling overboard the chimæra of contagion, as we have already done with the monster of protection—

Be commerce free—that thousands, yet unborn,
may live,
And freely share the blessings Heaven vouch-
safes to give.

I shall now conclude with the last table of the series published by the registrars, for the purpose of comparison with 1832:—

Statistics of CHOLERA in 1892 compared with 1849.

Esti- mated popula- tion.	CASES.			DEATHS.			Centesimal proportion of			Duration of		Monthly Mortality.					Periods of Greatest Intensity.	Total Mortality from all causes.	
	Reported by the Board of Health.	Unreported.	Total.	Reported by the Board of Health.	Unreported.	Total.	Cases to Population.	Deaths to Population.	Deaths to Cases.	Mortality.	Board of Health Returns.	June and July.	August.	September.	October.	November.			
832 ...	31,600	1826	68	1894	711	68	779	5.99	2.46	41.13	From 11th June to 18th Septem. 99 days.	15th July to 18th Septem. 65 days.	237	500	42			6th to 15th August, 10 days, deaths 211.	Burials registered, June--Sep. 1020.
1849 ...	39,571	3217	143	3360	676	143	819	8.49	2.06	24.27	From 4th July to 17th Oct. 77 days.	17th July to 2d Oct. 77 days.	154	298	312	52	3	August { St. And. 127 } 10 to 19 { Charles 12 } Sept. { St. And. 39 } 15 to 24 { Charles 121 } Deaths registered, July--Oct. 1177.	

APPENDIX TO THE

ARTICLE ON THE USE OF ELECTRO-GALVANISM

IN A PECULIAR AFFECTION OF THE MUCOUS MEMBRANE OF THE BOWELS.

BY WILLIAM CUMMING, M.D., F.R.C.P.E.

I HAVE received several letters from professional brethren, expressive of a desire for more minute directions as to the mode of applying the electro-galvanism than I had given in my article, inserted in a previous number, with which request I have much pleasure in complying.

The instrument I use is made by Kemp, of Edinburgh, and has the two-fold advantage of transmitting the stream of electricity through the part operated on *continuously, without jerk or shock*, and of being regulated, so that the intensity may be either so slight that it can scarcely be felt, or so strong that it can scarcely be borne. It has the additional advantage of being made under the superintendence of one who is an excellent chemist, as well as a man of general science.

The instrument is so constructed that the conducting wires, to which are attached sponges, can be applied to two different parts of the body, between which the stream passes. In the disease to which my article refers, it has been my custom to place one of the sponges (the patient reclining on a couch) on the spine, between the upper portion of the lumbar and the lower part of the sacral region; while the other is placed over the abdomen, parallel to the tract of the colon, along which it is drawn, allowing it to rest two or three minutes over five or six spots, at equal intervals of this tract. The intensity of the agent, slight at first, is daily increased, till it creates either pain or a feeling of great pressure.

If the case be one of constipation merely, the same treatment is adopted; and I think I am entitled to say that the success met with in these cases will in time lead to its adoption in preference to the other curative modes now in practice. Daily experience confirms my previous statements, and justifies

me in urging it on the attention of the profession. I had lately under my care a patient who had suffered from constipation for sixteen years. During the first seven years she had been relieved by aperients; but at the end of that time, they, though varied and sufficiently powerful, ceased to affect her. She then had recourse to injections, which she had employed more or less regularly till I saw her. It need not cause surprise that she suffered from piles and prolapsus of the rectum to a very painful degree, and that she was both weakened and rendered thoroughly miserable by this unnatural state of matters. In the course of two months she was effectually cured, a natural evacuation having been procured daily after the tenth day from the commencement of the electro-galvanic treatment. It would be an unnecessary waste of time to record the many similar cases that have been under treatment and benefited. A few trials, which are easily made, will convince any one that I do not overstate the favourableness of the results. The only difficulty I have experienced is the apprehension on the part of the patients that they must encounter an unpleasant shock. This difficulty the first application completely surmounts.

This treatment is not urged as being new in its application to constipation, but because it has not been so frequently and systematically pursued as its efficacy would warrant. Nor are its effects in the removal of this state more worthy of consideration than its happy influence over the general system, by which it restores the tone of the body, and relieves the oppression of mind so invariably accompanying that condition. And this, of course, in its turn reacts on the local inertia, and cooperates with the treatment in maintaining the elasticity and vigour thus produced.

Nor is it in constipation only that its influence is favourable. On the diarrhoea that so frequently alternates with a confined state of the bowels, to whatever cause short of organic disease it may be assigned, it exerts a beneficial action. And perhaps it is not difficult to comprehend this, if we may be permitted to conjecture that both depend on inaction of the muscular tunic of the intestinal canal. It is probably not presuming too much to infer that the vermicular motion of the bowel, which is produced by that part of the bowel,

favours the elimination of the mucous secretion. If, then, this secretion be not thrown out in sufficient quantity to lubricate the internal coat, and mix freely with the fecal matter, the irritation produced by the latter acting on a surface not adequately protected, can scarcely be supposed not to give rise to an amount of morbid excitement, which shows itself in the form of diarrhoea, and is so far a beneficial effort of nature to compensate for the regular and natural action of the bowels. And if so, we may thus understand how the same agent may remedy two very different states.

Dr. Alderson, in his admirable book on Diseases of the Stomach, remarks that "the want of those contractions which are proper to the colon in its healthy state, may be the *first* cause of general delay throughout the whole canal." That this is true in a great majority of cases is obvious from the fact, that an injection seldom fails to bring away the accumulated mass in a very short time after its exhibition, and that, too, when administered in an amount and of a quality that cannot be conceived to act beyond the sigmoid flexure. In such cases the electro-galvanic treatment, by restoring the tone of this portion, may be regarded as likely to effect a cure. And that it does so, my own experience abundantly attests.

I would therefore urge its systematic use on the attention of the profession. No patient who has once experienced its good effects will be reluctant to submit to its continued, and, if necessary, its repeated application. It is as easily managed as the common enema syringe, can be applied by the patients themselves, does not interfere with or affect, if the directions formerly given be followed, any other organ in the neighbourhood, such as the bladder and womb, and has this great recommendation, that instead of, as in the case of aperients and enemata, every exhibition of it confirming the disease and demanding a constantly increasing amount for its operation, it gradually lessens the atony, and ultimately fully restores the natural function.

140, George Street, Edinburgh,
2d January, 1850.

MEDICAL GAZETTE.

FRIDAY, JANUARY 18, 1850.

THE remarks which we recently had occasion to make on Mr. Syme's pamphlet,* were chiefly confined to the question of the monopoly of practice in England by licentiates of the Apothecaries' Society. It is, of course, to be understood, that there should be a simultaneous abolition of monopolies of practice in Scotland. If we mistake not, there exist in that part of Great Britain some local privileges which interfere not only with the free practice of English members and Licentiates, but with the practice of Scotch Members and graduates, unless they happen to belong to the licensing body which exercises the rights over a certain district.

In a Parliamentary Return† now before us, the rights of an M.D. of the University of Edinburgh are thus defined.

"The degree of M.D. conferred by the University of Edinburgh renders the possessor of it eligible to the Royal College of Physicians of Edinburgh, and by long custom, gives the right to practise throughout the British dominions, except where a local restriction exists to the contrary."

In the same document we find the following statement of the rights of the Licentiates of the Royal College of Surgeons of Edinburgh. "Persons holding this diploma are entitled to practise the arts of Anatomy, Surgery, and Pharmacy, within the counties of Edinburgh, Linlithgow, Haddington, Fife, Peebles, Selkirk, Roxburgh, and Berwick. Although possessing no ul-

terior statutory privilege, they have been, by the custom of the country, received as practitioners of these arts in every part of Scotland, and till the passing of the Apothecaries' Act of 1815 in every part of England except London." The return from the University of Glasgow is silent on the subject of the privileges of its M.D.'s and C.M.'s.

The privilege granted to the University and King's College, Aberdeen, by the charter of James IV., is to the effect—"That the degrees conferred by the University should carry with them all the usual privileges and immunities that are attached to such degrees in other Universities." The diplomas of Marischal College confer on their possessors the rights "*medicinam exercendi hic et ubique terrarum potestatem cum omnibus et singulis illius gradus privilegii, immunitatibus et honoribus*," as in other universities; but it is added, "the powers thus conferred may of course be obstructed in districts where other parties have a legal right to exclusive privileges." The "*ubique terrarum*" is, therefore, somewhat limited. The privileges of the graduates of the University of St. Andrew's are not stated in the Return.

The rights and privileges of licentiates of the King and Queen's College of Physicians, Ireland, and of graduates of the University of Dublin, are fixed rather by long-established usage than by law. The diploma of the Royal College of Surgeons (Ireland) confers on its possessors a general right to practise surgery, and the exclusive privilege of being appointed surgeons to County Infirmaries. The Apothecaries' Hall of Ireland confers by its license the right of charging for professional attendance, and for medicine, with the exclusive right to keep shop for dispensing and compounding medicine.

form of the profession
ot, he conceded that

* Letter to the Lord Advocate, on Medical Reform, by James Syme, F.R.S.E. Edinburgh. 1849.

† Returns from the Colleges of Physicians and Surgeons, &c., of Great Britain, dated 5th Aug. 1846.

there shall be an entire abolition of exclusive privileges of practice, whether existing in England, Scotland, or in Ireland. The local privileges of Scotch practitioners may not often be exercised to the injury of their Scotch, Irish, or English brethren: nevertheless, if we are not misinformed, members of the English College of Surgeons, and licentiates of the Apothecaries' Society, cannot legally practise north of the Tweed. Indeed, the license of the Society of Apothecaries specifies the limits of England and Wales. Admitting that the English licentiates practising in Scotland, may escape prosecution by the Universities and Colleges of that part of the kingdom, they are still much in the same position as Scotch graduates south of the Tweed. The Society of Apothecaries have long since declined prosecuting *bonâ fide* Scotch graduates or licentiates; rather, we believe, from a sense of the unfairness of interfering with really qualified men, than from the expense of conducting such prosecutions. Mr. Syme has suggested that the establishment of the "County Courts" has, by the cheapness of the legal process, "rendered any attempt to trench upon the Apothecaries' province, without their license, *sure to incur punishment.*" We wish Mr. Syme had adduced some *facts* in support of his statement: until he has collected a few cases in which punishment has been thus incurred, we must decline adopting this view. If the strength of his case rested on the injury inflicted upon Scotch graduates and licentiates by the County Courts Act, which has now been for a considerable time in operation, we think the Lord Advocate would have no good ground for interfering.

The truth is, the monopoly of practice, whether in England or Scotland, is rather theoretical than real. We quite agree in the propriety of abolishing

such monopolies by law; but then the abolition must be universal.

There is another condition which the justice of the case demands, before the practice of the United Kingdom shall be thrown open to the members or licentiates of all British Universities, Colleges and Halls. This is, that there should be an *equality of education and examination*, and, as far as possible, of expense. There must be no manufactory of cheap diplomas, or licenses to practise, nor should any exclusive privileges be conferred on English, Scotch, or Irish Colleges, which, irrespective of justly acquired merit or honour, may cause the diploma of one institution to be more eagerly sought after than that of another.

Mr. Syme enters but little into the subject of medical education. He looks upon the London system of medical education as very defective compared with that of Edinburgh.

"Indeed, it would not be difficult to show, that so far from being inferior, the system of teaching in Scotland is much more complete and ample than that of England, where a large part of the education which qualifies for the Apothecaries' license is derived from self-constituted teachers, many of whom are young men having no intention of lecturing permanently, or any serious preparation for doing so, and engage in it merely as a temporary occupation until they succeed in acquiring the more lucrative employment of practice. In London, the lectures on such important subjects as the Practice of Surgery are given only three times a-week, instead of six as in Edinburgh. The extensive subject of *Materia Medica*, which is here with difficulty discussed in six months, is there, in accordance with an express regulation of the Apothecaries' Company, compressed within the narrow limits of a three months' course. And so imperfect is the system of clinical instruction in London, that not a single course in the Surgical department delivered there, can be recognised by the University of Edinburgh as affording the requisite qualification for graduating

here. It would be easy to confirm these statements by adverting to the present state of the London School, in respect to the attendance of students, which, whether regarded as the effect or the cause of professional instruction being so imperfect there, very distinctly displays the tendency of public opinion."

While we freely admit that the graduates of the University and Licentiates of the Royal College of Surgeons of Edinburgh, by reason of their going through a medico-chirurgical education and examination, are as fully qualified for practice in England as those English practitioners who have passed an examination at the College of Surgeons and Apothecaries' Hall, we must deny the inference that the test of a sound medical and surgical education consists in the *number of lectures* delivered on particular subjects. The error of the Apothecaries' Society has, we consider, been the very reverse of that imputed to them by Mr. Syme. Hitherto the Apothecaries' Society have demanded attendance on a six months' course of *materia medica*, consisting of 100 lectures. The three months' course objected to by Mr. Syme will only come into operation, under the new rules, for the first time next summer. If the *number* of lectures were a fair test of the quality of a medical education, it may be surely satisfactory to Mr. Syme to know that the curriculum of the Apothecaries' Society has, until now, comprised 1,510 lectures, spread over three winter and two summer sessions! There is a growing feeling in the profession that students are *overlectured* and *undertaught*, and that more practical and less oral teaching would be a most desirable improvement in medical education. We have yet to learn that a man will become a better *surgeon* by hearing *six* in place of *three* lectures on surgery a week! Three lectures per week, and the time devoted to the other three spent in the wards of a hospital

or infirmary in observing surgical cases, would, we think, be a great improvement on the Edinburgh plan, as propounded by Mr. Syme. Students may *HEAR*, but they cannot *LEARN*, a large amount of surgery, or of other subjects, when lectures succeed each other so rapidly that there is no time for digesting, or even reflecting upon the information conveyed by the lecturer. The sarcastic remark on the qualifications of the self-constituted teachers, from whom the education which qualifies for the Apothecaries' license is derived, is not deserved, as an examination of the lists of the London medical schools will show. In fact, the information which these teachers impart is not intended for apothecaries only, but for gentlemen who propose to qualify themselves for the Royal Colleges of Physicians and Surgeons, and the University of London. Mr. Syme is, however, very irate against the Apothecaries' Society, and he cannot avoid allowing his judgment to be somewhat warped even against the innocent teachers, because their classes happen to be in part constituted of candidates for the Apothecaries' license.

The cause of the failure of all medical reform measures hitherto brought forward is thus briefly stated in the following paragraph:—

"Having been acquainted with all the attempts made for this purpose [medical legislation], I have constantly predicted their failure for two reasons. *In the first place*, because they were all measures of detail—extremely complex, and affecting a great variety of interests, so that any of the parties concerned wishing to impede their progress could easily find means to do so; like the London apothecaries, who not being able to deny the justice of equal privileges to practice being founded upon an equality of education, instead of questioning this principle, or expressing any unwillingness to consider the arrangements for carrying it into effect, confided the safety of their monopoly to

the tactics of delay. *Secondly*, because none of these measures were directed with a single straightforward view to general expediency and public advantage, but were all founded on the principle of give and take, or mutual concession and accommodation."

There can be no doubt that the cause of failure in these bills has arisen from their entering too minutely into details: a defect, however, which is scarcely avoidable considering the multiplicity of interests concerned. Mr. Syme further observes—

"In these bills it has been proposed to place large additional powers in the Colleges of Physicians and Surgeons—powers universally regarded by the profession, with exception of the members to be benefited, as not only dangerous, but certainly injurious, to the interests of medical science and practice—powers such as no College could have ventured to ask for itself, or otherwise than mixed up and mystified with the complicated details of a general measure. Indeed, the spirit of the present time is disposed to curtail rather than to extend the privileges of such bodies; since if constituted, as they ought to be, of well-educated, enlightened, liberal-minded gentlemen, practising their profession with the advantages afforded by residence in a capital city, and associated together for their mutual comfort and improvement, they require nothing more than the individual character and social position of their members to ensure public respect, and render their fellowship an object of ambition. While, if composed of different elements, having views entirely selfish and sordid, and being bent upon the acquisition of privileges which may be exercised for their own benefit, without regard to the interests of the profession at large, it is evident that no extent of power can render them respectable, and that any degree of confidence reposed in them could hardly fail to produce unworthy fruits. It is not long ago since a College, which has been the loudest in its demands for exclusive privileges, had confided to it the bestowal of a large sum of money as a reward for distinction in a field of literature cultivated by authors of the highest eminence; and yet, incredible as it may seem, the President, without any claim,

except the joint-authorship of an old nearly-forgotten publication, appropriated this prize to *himself* and the lawyer who had been his partner in the work. It is hardly necessary to remark, that a college which supported their president in, and identified themselves with, the perpetration of such an outrage on decency and propriety, could not be safely trusted with any power of controlling the members of a liberal profession."

Mr. Syme does great injustice to the Royal College of Physicians, as a body, by the remarks which he has here made. He falls into the error of condemning the many for the misdeeds of the few. If he will turn to our 43d volume, page 243, he will find in the remarks there made on the "Swiney prize-job," to which the above extract plainly refers, that he has no ground for the assertion that "the College supported their President in, and identified themselves with, the perpetration of such an outrage on decency and propriety." The fellows, as a body, were entirely ignorant of the proceedings which have called forth this censure from Mr. Syme. This gentleman does not appear to be aware that the President is not elected by the fellows or licentiates of the College, and that the latter have no power to control or influence his proceedings. One of the measures of medical reform was to confer this power on them; yet, strangely enough, Mr. Syme argues that the members of the College of Physicians,—a College which, according to him, has been loudest in its demands for exclusive privileges,—could not be safely trusted with any power of controlling the members of a liberal profession, because they identified themselves with a transaction of which they knew nothing! The plan of reform which they demanded would have given to them that power, for the non-exercise of which Mr. Syme now most unjustly condemns them.

Reviews.

Sketches of Medical Topography and Native Diseases of the Gulf of Guinea, Western Africa. By WILLIAM F. DANIELL, M.D. Assistant Surgeon to the Forces. pp. 200. London: Highley. 1849.

On looking over the title-page we see there is a fault to find in it. The "Native Diseases" of a country is always an ambiguous expression; and in the instance before us the text which follows does not sufficiently clear up the point. On the whole, we think the author means, Diseases of the Natives of Guinea; or it may refer to the endemic diseases of that country. The author's observations apply to the Bights of Benin and Biafra, the islands of Fernando Po, Prince's, St. Thomas's, and Anna Bonna. Commencing with the deserted Danish Fort of Quitta, as the most western point of this range, he proceeds in an easterly direction, noticing, one after the other, all the more remarkable towns and rivers found upon the coast. This vast seaboard, our readers will recollect, is situated within the tropics, like Sierra Leone, to the south-west of which it lies. But it possesses little of the attractive aspect of Sierra Leone, whose diversified shore and distant mountain ridges voyagers invariably describe as beautiful, and as going far to dispel the gloomy forebodings with which they are approached for the first time. On the contrary, the coast here described, is, with a few insignificant exceptions, an unvarying flat, covered with sombre and interminable mangrove forests, and indented with numerous creeks, rivers, and lagoons. It is dotted here and there with towns and villages; some of which, after having been occupied by Spaniards, Portuguese, or Danes, in the palmy days of slave traffic, have long since been abandoned by them, and have again fallen under the sway of the native princes, whose states stretch towards the interior. The towns are chiefly placed near the mouths of the numerous rivers emptying themselves into the Bight, through which the inhabitants communicate and trade with the various inland nations; the chief articles of commerce being palm oil,

ivory, &c.,—not forgetting slaves, when a convenient opportunity presents. Even in its present undeveloped state, the trade along the coast gives occupation to sixty or seventy ships, employing several hundred seamen, annually. British manufactures are every where to be traced; nor is it easy to see the limits to which a lawful trade with these nations might be carried, were it not for the repressing influence of a fatal climate.

Considering the degree to which the coast has been frequented for many years past, it is surprising how little authentic information we possess respecting its topography, seasons, natural productions, and inhabitants. Dr. Daniell very justly observes that this—

"May, in some measure, be owing to the individuals who visit that country being rarely possessed of the kind of education which he who travels into new and little known regions ought to possess, and partly also because it is not always held prudent among trading communities to promulgate information which might possibly conjure up a host of competitors. And then it is certain that, in many instances, those who were most competent to give information upon the countries of Central Africa have been the victims of its unhealthy climate."

When Dr. Daniell was first called on to practise his profession on these coasts he often felt the want of some work to which he might have referred for information respecting the diseases there endemic. "This hiatus," he says, "I have now essayed to fill up by the few succeeding hasty, and, I fear, imperfect sketches." We believe that the work before us will hardly answer this purpose. It is too slight and sketchy to stand as a work of reference; and it is, moreover, not very well arranged. It is topographical and hygienic, rather than medical. We must likewise add that, in our opinion, the author refers to what has been already published on the subject in a tone of less appreciation than the extent of his own contribution entitles him to assume. With regard to the endemic diseases of the country, we conceive that he has not added much to what has been already stated, and well stated, in the Report of the Niger Expedition, and in the excellent series of papers by Dr. Burton, contained in the Provincial Medical Journal as far back as 1842.

Dr. Daniell, however

very readable book, containing a great deal of curious information. He corroborates the general opinion that the variety of diseases observed in tropical Africa is much less than that observed in temperate regions. The most unhealthy spots along the whole coast are the Rio Formosa or Benin River, the Rio Nan or Querra, and the New Calabar. The most fatal and prevalent diseases are the endemic remittent fever, dysentery, small-pox, skin diseases, and syphilis. Small-pox usually breaks out as an epidemic at uncertain intervals: its character is most malignant. Nevertheless, few persons are seen pitted with it, for the simple reason that nearly all those attacked die. Syphilis is observed in some of its worst forms—namely, phagedenic ulceration, gonorrhœa, virulent and secondary eruptions. It is only born and bred natives who are able to resist the action of the endemic miasma; for our author observes that, if any of them happen to have lived for a long time in a more healthy country, they are liable to catch fever on returning among the swamps just like other persons.

The practice of physic in these countries is made up of a few simple remedies, backed by a host of superstitious appliances, as charms, amulets, &c. In the treatment of fever most of the natives along the coast rely much on the effect of sudorifics. For this purpose they employ heated sand-baths, ablutions of hot water, and rude attempts to imitate vapour-baths. "In some countries the patient is placed close to a large fire, whilst in others he is held over it, water being slowly dropped thereon, so that the steam, as it ascends, may act on the affected portion of the body." Dr. Daniell continues:—

"After a careful observation of the good effects of this remedial system, I was led to pay more particular study to the utility of its application, and at length to try a modified adaptation of it for the cure of those adynamic remittent fevers so destructive to European life. I have no hesitation in asserting that not only myself, but many others, who have experienced its efficacy by the speedy restoration to health, can vouch for its superiority over the ordinary practice of venesection, saline purgatives, and large doses of calomel, &c."

The operation of miasma on these

coasts is aided by the attacks of mosquitoes to a degree which would hardly at first be suspected.

"The slimy mudbanks and alluvial swamps, it is well known, generate myriads of mosquitoes and sandflies, and these insects so vigorously attack all who reside where they abound, as to prove exceedingly troublesome. In vain the wearied seaman seeks for repose; his winged tormentors multiply as the night advances, and, ever on the alert, incessantly hover around him, until he is at length forced to succumb to their harassing inflictions, and unwillingly hastens upon deck, there to await, in no happy mood, the break of morn. Heavy toil by day, with broken and unrefreshing slumbers, will soon undermine the strength of the most hardy; and hence it is that these, in conjunction with other apparently trivial causes, amply predispose the unseasoned stranger to the attacks of endemic typhoid affections, from which so few have as yet recovered."

The women generally are not prolific, and their children are puny and delicate until they approach puberty. In many parts mothers suckle their offspring for two or more years, with the view of strengthening their constitution. In other places along the Bight of Biafra, and elsewhere also, the bearing of twins is a great calamity to the mother, as both she and her offspring are put to death, on the principle that she has thereby placed herself on a disgraceful equality with the brute creation. The practice of female circumcision, as it is called, prevails among many tribes in that part of the world, and Dr. Daniell has given a full and interesting account of it. The operation is performed by native doctors, both male and female, in four different ways, according to the object in view. The first method consists in simple excision of the clitoris, in compliance with religious custom; the second is excision of the nymphæ, on account of hypertrophy,—a disease to which the native women are very liable; the third consists in excision of both nymphæ and clitoris. Dr. Daniell informs us that this operation is in general "effected at the desire of the woman herself, either in complaisance to the hereditary customs of the family to which she belongs, or to the arbitrary caprices of her superiors, and as a means of ingratiating into the favour of her liege master." The fourth operation is the removal of a portion of the

labia pudendi with either or both of the preceding structures. This is barbarously performed by masters to maintain the value of their young female slaves; for, unhappily, the grossest immorality prevails among this class, whereby their health and strength are impaired; and the object of the operation is to check this by producing permanent closure of the entrance to the vagina, which ensues more or less completely on the cicatrization of the wound. Among some of the tribes closure of the vaginal canal is resorted to as a punishment for females of rank who have been guilty of prostitution. It is effected through inflammation, caused by introducing the unripe pods of the capsicum frutescens into the canal, and it is attended with extreme suffering.

Beobachtungen und Untersuchungen über den rasch verlaufenden Wasserkopf Mitgetheilt von Karl Herrich. Regensburg, 1847.

Observations and Researches on Acute Hydrocephalus. By CHARLES HERRICH. Pp. 230. Ratisbon. 1847.

THIS work bears the stamp of minute and careful observation. The author does not offer it to the profession as a complete treatise on Hydrocephalus, but merely as a collection of 75 accurately recorded examples of the disease, from which certain points relating chiefly to its morbid anatomy may be deduced. It must occur to every one that the number of cases is too small to supply data out of which to frame the general statistics of hydrocephalus; and, accordingly, most of the tables given in this book are alone valuable as a truthful source whence materials may be obtained by future inquirers on the same subject. Dr. Herrich mentions that many more cases of hydrocephalus fell under his observation during the period over which his researches extend; but as his main object was to demonstrate the changes of structure in which the disease essentially consists, he determined to select his cases from such as were beyond all question true examples of the disease. In this way the range of his observations is limited to cases exhibiting cerebral syn-

death, showed on post-nation at least one ounce lateral ventricles." Fri

too, he has excluded cases of insanity, as well as others in which cerebral symptoms, with effusion, occurred towards the end of chronic diseases unconnected with the brain.

The author states that the great majority of his cases exhibited the co-existence of watery effusion in the ventricles, plastic exudation on some part of the cerebral membranes, and tuberculous deposit in the brain, or in other organs. Hydrocephalus, therefore, is not distinguished by anything peculiar in the nature of the morbid products, which are common to some other diseases, but by the situation in which these are found; to which circumstances all the characteristic symptoms observed in this disease are to be referred. Dr. Herrich has never seen an instance of hydrocephalus in which neither tubercles nor plastic exudation occurred. He does not deny that such cases may exist; but he considers that his own dissections have at least established their extreme rarity. The drift of his argument, therefore, confirms the opinion long maintained, we believe, by most persons in the country, that scrofula and hydrocephalus are most closely linked together. According to Herrich, hydrocephalus is a cerebral form of scrofula, more dangerous than other forms of the disease, merely from its being seated in the brain.

In constructing tables to illustrate the morbid anatomy of the disease, Herrich avails himself of twenty cases, recorded by another physician of Ratisbon, Dr. Schweninger, who had also written a work to prove the intimate relation between hydrocephalus and scrofula. (Ueber Tuberculose als gewöhnlichste Ursache des Hydrocephalus. Regensburg, 1839).

The following is an analysis of the morbid appearances found in the 95 cases. In 47, effusion of more than 13 of fluid into the lateral ventricles; plastic exudation, chiefly of recent origin, on the cerebral membranes, and tuberculous deposit in some part of the body.

The remaining 48 cases differed from the above as follows:—

A. In the absence of one or other of the two last-named deposits. Thus—

1. There was no tuberculous de-

there was no plastic exudation
cbral membranes; but it is to
ed that in 16 of these there

was plastic exudation on serous membranes elsewhere.

B. In partial resolution or metamorphosis of these morbid products. Thus

In 4 cases the tuberculous had been changed into calcareous matter, or cicatrices merely were found.

In 14 cases the cerebral exudation had been changed into a white or horny thickening of the membranes of the brain.

Of these groups the first represents the fully developed disease; the second, the immature disease; the third and smallest group exhibits the traces of previously existing disease.

We shall now shortly state some additional conclusions to which the author has been led by the present inquiry. Acute hydrocephalus occurs at all ages; but the number of cases which happen before the end of the fourth year equal in number all those that occur after this period of life. Hydrocephalus is seen more frequently in the male than in the female; and it is often hereditary, in which last case the symptoms are usually more strongly marked and of longer duration. The duration of acute hydrocephalus seldom exceeds three weeks; for the most part, it terminates between the eighth and the fourteenth days. Warm weather has probably some influence in shortening the period of attack. In the majority of cases the duration of the disease is shorter when there is no plastic exudation on the cranial membranes than where the exudation is abundant. The most common of all the symptoms of hydrocephalus is a tendency to coma, which, however, seldom becomes complete; but, on the contrary, it is often associated with the want of true sleep, or with restlessness, or convulsive twitches. It occurs when there is a deficiency as well as when there is an excess of blood in the brain. Convulsions are most apt to supervene when the disease is hereditary. The author has reason to believe that the disturbance arising from vaccination sometimes excites hydrocephalus in scrofulous children.

The following is a summary of the author's plan of treatment:—Prevent invalid mothers from nursing their offspring, and forbid the too abundant use of farinaceous food; enjoin a milk diet; and, in the case of feeble children, give veal broth. Where there is poverty of the blood, diligently administer the cod-liver

oil. The patient should be kept in a house where the air is pure, and yet not too dry. If there be no pulmonary irritation present, the patient should live much in the open air; and, when practicable, the lungs should be strengthened by frequent deep inspiration, by exercise, by reading aloud, &c.

2. Promote the functional activity of the skin by the frequent use of soap, or alkaline baths: those which produce transient irritation, or redness of the skin, are of most service. For the same reason, the occasional application of weak tartar emetic ointment to the nape of the neck, especially when the face and neck are liable to eruptions, is serviceable. In all seasons, and for all ages, woollen underclothing is indispensable.

3. Promote the action of the kidneys by giving syrup of squills to children, and small doses of Tartar Antimon., or Digitalis to adults. Excessive elimination of fluid, however, especially if caused by the abuse of purgatives, is to be carefully avoided.

4. When the disease has already made some progress, and there is reason to fear that deposits of plastic matter have occurred, the treatment ought to include occasional bleedings, always small in quantity, and rarely to be practised when the child is under one year of age. Nitrate of Potass, in mucilaginous mixtures, is strongly recommended. In children it is to be given in small doses, and with interruptions; in adults it is to be continued until the function of digestion begins to be disturbed. The force of the circulation is also to be controlled by small but efficient doses of digitalis. Blisters, although of acknowledged power in promoting absorption, are yet entirely without effect in removing tuberculous deposits, and they are decidedly hurtful where fever or general irritability is present. When the most urgent symptoms are past, quinine is useful, especially when some degree of exacerbation, as quickening of the pulse, is apt to occur towards morning. The author admits that he has had no experience of the effects of calomel and tartarized antimony in promoting the absorption of the various matters effused in this complaint.

Traité Complet de l'Art des Accouchements. Par M. PAUL-ANTOINE DUBOIS, Professeur de Clinique d'Accouchements à la Faculté de Médecine de Paris, &c. &c. Tome premier. 8vo. pp. 286. Paris. June, 1849.

We here bring under our readers' notice the first part of a treatise on obstetrics by an author of European renown in this branch of medical science. The principles and practice taught by M. Dubois have extended throughout France, and have spread his fame wherever his numerous pupils have been dispersed.

This first instalment of this valuable work embraces only the anatomical introduction, including the osseous structures, the uterus, ovaries, and fallopian tubes, the external organs of generation, the bladder and rectum in their relation to the organs of generation, and the mammary gland. Numerous wood-cuts exemplify the text throughout. We quote the author's observations on the structure of the uterus:—

"While admitting the muscularity of the uterine parenchyma, we must not overlook the fact that this tissue exists here in a rudimentary state, and that the uterine walls, when the cavity is empty, contain a contractile apparatus, the development of which is incomplete. We shall subsequently see that pregnancy gives rise to this development. The modification which this state effects in the uterine structure endows it with the obvious characters of muscularity. Thus it acquires the colour of muscle, while its condensed and inextricably interwoven fibres become transformed into fasciculi which may be separately dissected" (p. 167).

The internal surface of the uterus is lined by a mucous membrane, which the author states is destitute of the ordinary submucous tissue. Its internal aspect is thus described by M. Dubois:—

"When examined in a longitudinal section of the uterus it appears to consist of filaments regularly superimposed one over the other, in perfectly parallel order, perpendicularly to the surface of the uterus. This arrangement gives to the section of this membrane a smooth, regular, and homogeneous appearance, as contrasted with the irregularly interlaced u-
-which is studded with va-
-shining white stris.
-of this membrane, mc

congestion, presents a vivid or deep red colour, or a grey colour under opposite conditions. The mucous glands present the form of small, contorted, and vermicular tubes, in which three several parts may be distinguished:—1. An initial or deep extremity; 2, a body, or middle portion; 3, a superficial or terminal extremity. The initial extremity is a *cul de sac* in relation with the uterine walls. The body of the gland is the middle contorted portion. The terminal extremity is slightly swollen, and in relation with the uterine cavity. The dilatation or cup at the superficial extremity opens by a minute orifice. These openings constitute the holes with which the internal uterine surface is studded. The glands are generally single: sometimes, however, two open by one orifice. Simple or compound, however, these glands constitute the greater portion of the uterine mucous membrane" (p. 171).

Contrary to the modern views of uterine pathology, M. Dubois states that the mucous membrane of the cervix uteri is more slender than that of the fundus. The reverse is advanced by Dr. Bennet as the basis of his opinions on inflammatory diseases of the cervix.

We trust that the preceding extracts will suffice to show our readers that the author treats his subjects very fully; and we doubt not they will, with ourselves, anxiously desire the publication of the succeeding parts of this work, which will treat of the physiology and pathology of the parts concerned in childbearing.

La Porrette et Monte Catini. Par ROBERT MAUNOIR, D.M. 8vo. pp. 255.

Résumé des Rapports publiés par M.M.

Paolini et Malucelli, sur la clinique des Thermes de la Porrette et de Monte Catini. Par ROBERT MAUNOIR, D.M. 8vo. pp. 123. Florence. 1848.

THE villages here described are situated at the foot of the north-eastern aspect of the Apennine range in the state of Bologna. The surrounding scenery presents all the picturesque features of mountainous regions, with the superaddition of geological characters peculiar to itself. Among them are deep fissures whence emanate jets of carburetted hydrogen, sufficient even for purposes of illumination.

The mineral and thermal springs, found in the vicinity, contain chlorine, sulphur, bitumen, and acetic acid, oxygen and nitrogen

gases. Their medicinal virtues are adapted to chronic and organic diseases.

We judge, from the description contained in these volumes, that those who seek renovated health by continental travel should not omit to visit La Porrette and Monte Catini.

Every Man his Own Doctor. The cold water, tepid water, and friction cure, as applicable to every disease to which the human frame is subject; and also to the cure of diseases in horses and cattle. By Captain R. T. CLARIDGE. Pamphlet, 8vo. pp. 211. London: Madden. 1849.

If every man can be his own doctor by the employment of hydropathic treatment, whence the need of costly "establishments" for its special application "to every disease to which the human frame is subject?" The pretensions, the merits, and the demerits, the successes and the failures of hydropathy, are so familiar to our readers, that we shall not further occupy their attention on the present work, than by informing them that here is a work by one of its most sanguine advocates, in which they will find the *merits* at least of the *system* recorded.

This book presents a brief narrative of the life and *persecutions* of Priessnitz; an account of the claims of hydropathy supported by quotations from various writers who have testified to the curative powers of water, from *Homer* down to the *Rev. John Wesley*; a denunciation of the use of the lancet and of drugs; the various processes and modifications of the mode of employing the water cure; and a long string of diseases in which it is asserted to be the *panacea*.

What little that is really sensible in this work, as in the *system* itself, is certainly not the peculiar property of the learned captain, or any other hydropathist, while we think their legitimate authors could not but express surprise of the use to which the opinions of *medical* writers are applied.

Some of the cases related are *marvellous*: one lady was cured of headache, indigestion, cramps, &c., "in little more than a year." (p. 9.)

The Princess Esterhazy was cured of *cancer* in seven months. (p. 187.)

We refer those of our readers, who may desire to learn the real merits of

hydropathy, to two papers, by M. Valleix, in the *Bulletin Thérapeutique Général*, 1848.

Some Account of the Life, Writings, and Character of the late James Cowles Prichard, M.D., F.R.S., M.R.I.A., Corresponding Member of the National Institute of France, &c. &c. By JOHN ADDINGTON SYMONDS, M.D. Pamphlet. 8vo. pp. 54. Bristol. 1849.

IN the small compass of this biographical memoir we have an eloquent and just tribute to the memory of one of whose wide-spread fame the medical profession can scarcely be too proud. The name of Prichard must ever be co-extensive with civilisation, with learning, and with science. His memory belongs not to one department of science only, but to many, embodying the high characters of modern intellectual greatness with the possession of all Christian graces. With medicine on the one hand, and the stores of learning on the other, he adorned his profession and benefited the whole world by his knowledge.

In his excellent work on the *Physical History of Mankind* he laid a solid foundation, and raised the splendid superstructure of which others had faintly traced an ideal outline. From the labours of Dr. Prichard there has resulted a new branch of science, requiring for its successful prosecution such a rare combination of acquirements as must ever have deterred other than a powerful and well-stored mind from its prosecution, still more from the attempt at its original formation. The science of ethnology, which owes its existence to Dr. Prichard, is not, as regarded by many, a merely speculative study, but it is a practical and laborious pursuit, which, extending its operations to the ends of the earth, teaches man to find his brother man, and learn *humanity*. But ethnography, although the chief, does not alone constitute the claims of gratitude to Prichard's memory. Dr. Symonds relates his other contributions to medical science, which alone comprise more than has been accomplished during the entire life-time of many men with greater opportunities. It is much to be wished that the apathy of many holding rich opportunities of adding to science could be roused by such an example.

We take occasion to add that we rejoice in being able triumphantly to point to one more among the great of our profession, of whose departure from this life his intimate friend and biographer can say:—"No spirit could pass more blameless and untainted from its mortal trial,—none more fitted for the communion of the great and good,—none more ready to appear—

"Before the Judge, who thenceforth bade him rest,
And drink his fill of pure immortal streams."

Let our readers possess themselves of this short sketch of a great and good man: let us all compare ourselves therewith. The comparison will furnish us with a wholesome lesson of humiliation: the old, that they have done so little; the younger and more active, that they are doing so little with the talents entrusted to their care; while all must desire to earn as good a title at their journey's end.

Digestion and its Disorders considered in reference to the principles of Dietetics and the management of Diseases of the Stomach. By LANGSTON PARKER, Professor of Anatomy and Physiology in Queen's College, Birmingham, &c. &c. Small 8vo. pp. 88. London: Churchill. 1849.

THIS little work contains a brief but clear account of the nature of the digestive process itself, and a description of the various forms of indigestion, with their several modes of treatment. From the extracts which we here bring before our readers, they will be enabled to judge of the value of the work itself.

"The disorders of digestion I shall notice under the heads of weak digestion; inflammatory indigestion; impaired digestion; disorders of the juices of the stomach; and disorders of its nerves." (p. 39.)

"This variety of disordered digestion (inflammatory indigestion) is most commonly due to errors or excesses in diet; to a mode of living which either habitually overloads the stomach, or which is too rich and stimulating, and thus the source of a continual unhealthy excitement. It may, again, be produced by a neglect of the common precautions necessary to the healthy action of the powers of the stomach. Habitually quick eating hurries into the stomach a hard unmastered and the period of digestion

source of irritation, which frequently gives rise to this kind of indigestion." (p. 49.)

Mr. Parker adds observations on the various articles of diet. These remarks are judicious, and deserving of attention. We regard this short essay as comprehending much of great practical importance in reference to the disorders of digestion, and as constituting a valuable practical assistant, especially to the junior practitioner, who will often find himself perplexed in the treatment of disorders which, varying so much as those of digestion with constitutional peculiarities and habits of life, will often baffle the utmost skill, and will as frequently yield to empirical treatment, when the patient is placed in the indispensable collateral hygienic conditions.

Proceedings of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, Jan. 8, 1850.

DR. ADDISON IN THE CHAIR.

Two Cases of complete Intestinal Obstruction, arising from Disease of the Sigmoid Flexure of the Colon and the Rectum; in which the descending Colon was unsuccessfully opened in the Loins. By FREDERICK FIELD and JOSIAH CLARKSON, Members of the Royal College of Surgeons of England. [Communicated by JOSEPH HODGSON, F.R.S.]

Mr. Field's case.—On May 3d, 1846, the author was requested to see J. R., a coach-axe forger, aged 35, corpulent and muscular, and accustomed to drink largely of beer. He had always enjoyed good health until a year back, when he began to suffer from pain in the bowels, constipation, and tenesmus, his stools becoming scanty, and voided with difficulty; there was also some derangement of the functions of the stomach. Three months since, all these symptoms became aggravated, and were relieved only temporarily by purgatives. He often vomited after his food: his stools were voided with more difficulty, being of a more fluid consistence, though he had not noticed any diminution in their diameter. Four days before the author's visit, the bowels refused to act, and all the symptoms were greatly aggravated. When seen, the bowels were greatly distended and

tympanitic: there were pain, tenderness, and some bulging, over the transverse colon: the pain was paroxysmal, and accompanied by strong tenesmus; vomiting was almost incessant. Calomel gr. v., opium gr. ij. were ordered; to be followed by a black draught every four hours. On the following day (May 4th) the symptoms continued unabated: the urine was scanty and high-coloured. Prussic acid and castor oil were administered at distinct intervals, and the calomel and opium continued. Some relief to the pain and vomiting was thus procured. In the evening a purgative enema and warm bath were ordered: the injection was immediately returned, and not more than a pint could be thrown up. On the 5th of May the colon-tube was passed up, but could not be introduced more than eight inches. Twelve ounces of blood were taken from the arm. Larger doses of calomel and opium, croton oil, the cold douche, were successively tried, but without any relief from the bowels, or other than a temporary relief to the more urgent symptoms: galvanism was equally ineffective: still the patient's strength and spirits were sustained until the 15th, when they began to fail, and his countenance, tongue, and pulse betrayed a marked change for the worse: the matter ejected by vomiting had assumed a feculent colour and smell. It was then determined that an operation was the only resource left, and this was accordingly performed. As the patient lay on his back or belly, no indication was observable of the seat of obstruction, for the abdomen was equally swollen on both sides, and no bulging was perceptible in either lumbar region, though percussion elicited a duller sound on the left than right side. The patient was extended on a bed, with his face downwards, and a transverse incision was made in the left loin, commencing about two inches from the spine, and carried directly on wards for five inches and a half, about one finger's breadth above the crest of the ilium. The skin, fat, latissimus dorsi muscle, and quadratus lumborum, were successively divided, and a shining membrane exposed. This last, which was mistaken for intestine, proved to be fascia, and when divided a large quantity of fat was brought into view, which was carefully cleared away, and the intestine at length exposed at a considerable depth. Sutures were passed through it to retain it in its position, and subsequently to affix it to the edges of the wound, and an incision was then made into it to the extent of half an inch, which immediately gave exit to an immense quantity of light-coloured fluid feces. Vomiting entirely ceased, and the patient was relieved of all his urgent symptoms. The opening in the bowel being

fixed by sutures to the skin, a large broad poaltice was placed over the wound, and the patient was enjoined to lie on his left side. Through the following night the evacuations continued abundant; the belly became soft and free from tenderness, and the general symptoms were still further relieved. On May 17th the sutures had ulcerated from the intestine, which was adherent all around to the circumference of the wound. On the 18th, the wound was rather inactive: it was syringed with yeast mixed with warm water, and dressed with lint dipped in oil, the surrounding skin being smeared with cerate. Granulations subsequently sprang up; and with occasional variations and trifling drawbacks, he proceeded favourably, and his health became ultimately entirely re-established, and he was able to follow his former calling, which required great physical exertion. The only interruption to perfect health resulted from occasional constipation, caused, apparently, in a measure, by tendency to contraction of the artificial anus, which was remedied by the introduction of a bone clyster-pipe, and the injection of warm water: thus, the passage was dilated, and the feces were at the same time softened. This state of things continued until the latter part of 1847, when the patient was attacked with symptoms of hepatic disease: he lost his appetite, and became emaciated and ascitic, and ultimately died in February 1848, one year and nine months from the time of the operation.

On examination of the body, the peritoneum was found covered with lymph, the liver granular and thickened, and the kidneys congested. The stricture of the intestine was found to be in the sigmoid flexure of the colon, and was about four inches in length, this portion being filled by a plug of coagulated lymph. This plug became broken up and detached by maceration in spirit, leaving the intestinal tube continuous, though contracted and slightly thickened. The plug resembled the deposit which takes place in the larynx in acute laryngitis. The artificial opening was funnel-shaped, with its apex externally; the outer orifice was contracted to the size of a small goose-quill: it appeared to be lined by mucous membrane. The lower portion of the intestine was much contracted.

Mr. Clarkson's case.—B. F., set. 21, a robust and healthy-looking woman, applied to the author in July 1846, with symptoms of dyspepsia, the bowels not having been relieved during the preceding five days. She was ordered an aperient pill and draught. Two days afterwards she returned, the symptoms being still unrelieved, and bowels

still constipated. A stronger aperient was administered, but still without relief. On the 22d the bowels not having acted since the 14th she complained of pain in the umbilical and left hypochondriac regions; the abdomen was slightly distended and tympanitic, and pressure upon its parietes increased the pain. Constant nausea, but no vomiting; pulse 110; urine copious. To take Croton oil, half a drop every second hour. On passing the colon tube, it could not be introduced further than six inches. Two pints of fluid were injected, and returned untinged by fecal matter. The abdomen became more distended and tender; flatus moved about the bowels, and appeared to be arrested in the left iliac fossa. Leeches were twice applied, and some of Battley's solution of opium given: vomiting had commenced. Subsequently, the following expedients were tried, but in vain, to induce the bowels to act; large doses of opium, the cold dash, free injection of water into the rectum, and its retention by pressure, galvanism; and, on the 26th, the symptoms becoming more urgent, an operation was undertaken, Mr. Hodgson concurring in the propriety of the step, and urging its immediate performance. The patient was laid on her belly, a pillow being placed under the abdomen, so as to raise it. An incision five inches in length was carried outwards from the edge of the erector spinæ muscle, about two fingers' breadth above the crest of the ileum. The quadratus lumborum and fascia were exposed and divided; and, after some loose fat was removed, the intestine was reached. Four ligatures were passed through it and fastened, two to the upper and two to the lower edge of the wound, and the bowels then divided longitudinally between them. A large quantity of fluid feces at once escaped. The patient, who expressed herself relieved, was placed on her left side in bed. The discharge continued very profuse, and a poultice was shortly after applied. On the following day the symptoms were further relieved, and the distension of the belly had subsided, the escape of feculent matter being abundant. From this time she steadily improved, and was able, after a time, to return to her usual household duties. Whenever the bowels became confined aperient medicine and an injection relieved her. But a tendency to contraction of the bowel gradually exhibited itself, which was for a time relieved by the use of bougies. This annoyance increased, and her health began to suffer seriously after the expiration of ten months. The patient's appetite failed, digestion was impaired, and she suffered from more constant and severe pain. The artificial anus was further dilated with sponge tents, and sub-

sequently with the scalpel, but the constipation and other symptoms were not relieved, and she vomited nearly all she took into the stomach. She died in September, 1847, having survived the operation nearly fourteen months.

On examination of the body the parietal peritoneum was found mottled, tubercular, and thickened. The opposed surfaces of the intestine were glued together, and to the liver, spleen, and stomach. These adhesions were very firm, and sufficient to have greatly interfered with the peristaltic action of the bowels. The small intestines were distended with feces, but the transverse and descending colon were empty. The mucous membrane was ulcerated at several points. The obstruction was found to be about six inches from the anus, and on a level with the fundus of the uterus. It consisted of dense cartilaginous substance, surrounding the intestine and completely obliterating the canal. It appeared to have originated externally, and pushed forward the fundus of the uterus, to which it adhered firmly. On section the canal was found to be completely obliterated to the extent of half an inch. The edges of the artificial opening were rounded and smooth, and the neighbouring mucous membrane was healthy.

PATHOLOGICAL SOCIETY OF LONDON.

Monday, Jan. 7, 1850.

Anniversary Meeting. Election of Officers.

THE annual general meeting of this society was held on Monday, January 7th, for the purpose of electing officers and other business.

The SECRETARY read the report of the Council, from which it appeared that the affairs of the Society were in a flourishing condition. The number of members had considerably increased during the past year. The specimens presented by various contributors, though not numerically greater, were of a character to raise the position of the Society, both from the intrinsic merit of the morbid preparations, and also from the greater fulness and exactness of the reports that accompanied them. The report then alluded, in suitable terms, to the severe losses the Society had received since their last meeting by the death of some of its most valuable members, especially of Mr. C. Aston Key, who had contributed so much, by his valuable and regular attendance in the chair, to promote the objects of the Society.

The following gentlemen were then elected as officers for the ensuing year:—

President.—Peter Mere Latham, M.D.

Vice-Presidents.—Benjamin Guy Babington, M.D., F.R.S.; Richard Bright, M.D., F.R.S.; C. J. B. Williams, M.D., F.R.S.; F. H. Ramsbotham, M.D.; J. M. Arnott, Esq., F.R.S.; Cæsar H. Hawkins, Esq.; Richard Partridge, Esq., F.R.S.; William Fergusson, Esq., F.R.S.

Treasurer.—James Copland, M.D., F.R.S.

Council.—Henry Oldham, M.D.; William Jenner, M.D.; William McIntyre, M.D.; William Coulson, Esq.; Alfred Poland, Esq.; Samuel Solly, Esq., F.R.S.

Honorary Secretaries.—Edward Bentley, M.D.; G. Pollock, Esq.

The time of the meeting having been occupied in this general business, the specimens were less numerous, and the reports accompanying them briefer than usual.

Mr. WALTON presented a specimen of a very large tumour, that he had removed from the side of the face and neck of a middle-aged man. Previous to removal it gave the impression of being a malignant disease; but, on examination, it proved to be of a fibro-cartilaginous nature. The wound healed rapidly after the operation.

Dr. JENNER presented a specimen of tubercular matter in the substance of the heart of a child eleven months old. This derived its chief interest from the fact of its extreme rarity. Also, a specimen of recent pericarditis, with effusion of lymph over the surface of the heart, in a child five months old.

Mr. GAY presented a specimen of the end of the tibia and post tibial nerve, removed by secondary amputation. The man from whom this specimen was removed was admitted into the Free Hospital under Mr. Gay's care some months ago, suffering from disease of the tarsal bones of long standing. For this disease Mr. Gay performed Mr. Syme's operation of amputation of the ankle joint, sawing off the lower end of the bones. Some sloughing of the flap followed the operation. This subsequently separated, and the stump healed by granulations, with the exception of two or three sutures. He now began to suffer from intense pain of a neuralgic character, for which he took large doses of opium, but with only temporary relief. As his health was beginning to suffer, and his strength to fail, it was determined to amputate the limb higher up. On examining the end of the bone there was evidence of caries. The end of the nerve exhibited some bulbous enlargements.

Mr. Gay also presented a specimen of spermatic animalcules, which he found in the fluid of a cyst on the spermatic cord.

ACADEMY OF MEDICINE, PARIS.

Jan. 3, 1850.

PRESIDENT, M. DE BRICHETEAU.

A COMMUNICATION was received from M. Debrou, of Orleans, relating the particulars of a case of complete congenital occlusion of the vagina cured by operation, in which pregnancy subsequently occurred.

A memoir was transmitted by M. Courty, of Montpellier, on the Pellagra met with in the valleys of the Eastern Pyrenees. This memoir was referred to the Commission on Pellagra.

M. MAZADE, of Anduze, transmitted an essay on the employment of sulphate of quinine in typhoid fever, in which the author expresses the opinion that this remedy is useless, except where the typhoid fever presents remissions or irregular paroxysms.

M. MATHIEU submitted a new *cephalotribe*.

A report by MM. Bouillaud and Bousquet on an Essay on Congestion of the Spleen, by M. Durand, was read. In this essay the author confines himself to the congestion of the spleen in intermittent fever, and regards the latter as an effect of the former, reversing the view generally taken of the pathological relations of the two conditions.

The reporters, MM. Bouillaud and Bousquet, do not concur in the author's opinions; but, in an elaborate report, they discuss and refute his various arguments. X

SURGICAL SOCIETY OF PARIS.

Jan. 2, 1850.

PRESIDENT, M. DEGUIRE (PERE).

M. LABREY presented a thesis by M. Valette, on fungoid tumors of the dura mater and cranial bones.

M. Valette classifies these morbid growths thus:—

First series—1. Those originating in the cellular tissue beneath the arachnoid membrane, or from the pia mater.

2. From the internal surface of the dura mater.

3. From the external surface of the dura mater.

Second series—1. From the diploe.

2. From the pericranium or cellular tissue connecting this membrane with the bones of the skull.

M. F. MARTIN read an essay on morbid relaxation of the pelvic symphyses. The symptoms in four cases, which M. Martin

related, were referable to the organs of locomotion. The treatment consisted in certain mechanical means which M. Martin had found efficient.

M. LENOIR related two cases of stone in the bladder, in which, lithotripsy having failed, he had had recourse successfully to the lateral operation. A discussion on these cases followed, in which MM. Chassaignac, Lavallée, Robert, Michon, and Seun, took part. X

ACADEMY OF SCIENCES, PARIS.

Dec. 31, 1849.

M. LECOUPPEY read a paper on the employment of acetate of lead in the treatment of struma, in which its action was stated to be especially beneficial in strumous congestion of the subcutaneous lymphatic glands, and that this therapeutic property is promoted by the administration of purgatives.

M. REGNAULT presented the researches of M. Millon on the elementary analysis of the chyle and the blood. M. Millon had analysed simultaneously the blood and the chyle of two dogs; the one fed during two days on milk alone, the other fed on fat, mixed with bread and meat. In the former the blood contained carbon and nitrogen, in the same proportions as those found in albumen, but containing a much greater quantity of oxygen than exists in the latter substance. The chyle from the same dog presented similar characters of a highly oxygenated albumen. In the dog fed on fat the chyle and blood contained carbon and nitrogen in the same proportions; but in this case, instead of an excess of oxygen, an excess of hydrogen had become fixed. Thus a very considerable modification of the chyle and blood is produced by variation of diet, whence a considerable modification of the nature of the secretions would necessarily ensue. These experiments prove also that the absorption of fatty matters is not exclusively the function of the lacteals, but that a general dissemination of the excess of fatty matters takes place under the circumstances indicated. X

UNIVERSITY COLLEGE, LONDON.

THE Council have appointed Dr. Alfred Baring Garrod to the offices of Professor of Materia Medica, and Physician to the Hospital, lately held by Dr. Anthony Todd Thomson.

Correspondence.

THE FIRST OUTBREAK OF CHOLERA IN LONDON.—DR. PARKER'S REPORT.

SIR,—In Dr. Parkes's letter of last week he states that, "on the 22nd September, 1848, John Harnold, or Harrold, the subject of the first case of cholera in London, died at a small receiving house for sailors in Horsleydown;" and, in his report to the Board of Health, the fact that Harnold's was the first case is also assumed.

It is on record,* however, that a person died in this neighbourhood (Chelsea) on the 19th of July, two months before Harnold, with the following symptoms:—

"Rice-water purging and vomiting; severe cramps; a cold, shrunken, and partially livid surface; a pulse to be felt only in the axilla; impeded respiration; a cold tongue and breath; intense thirst; a scarcely audible voice; and suppressed urine." "Epidemic cholera" was returned as the cause of death, and the case, on account of its importance, was communicated, in the first instance, to a society of gentlemen practising in the district,† and afterwards to the MEDICAL GAZETTE. In the meantime other instances occurred, and were reported. Your current remarks‡ appeared to recognise the case in question as identical in its symptoms and progress with these; and Dr. Parkes himself, at a meeting of the Western Medical and Surgical Society, admitted that it presented the characters essential to malignant cholera.

Under these circumstances, and with the impression strong upon my mind that this case was absolutely the same in all its features with those later ones which broke out in the neighbourhood, and among them those which Dr. Parkes saw with me,—I shall be excused if I inquire his reason for admitting the latter and excluding the former from his report.

I need not, I trust, lengthen my letter to assure Dr. Parkes that it is written without any design to impute to him intentional partiality in the selection of his early cases. His able report, as it at present stands, is likely to be quoted as an authority by those who would substantiate their belief in the importation of the disease; and my sole object is to protest against any such inference being drawn from evidence confessedly selected.

Yours faithfully and with

much respect,

SEYMOUR HADEN.

Chelsea, Jan. 12, 1850.

* MEDICAL GAZETTE, Oct. 13, 1848, p. 627.

† The Western Medical and Surgical Society.

‡ MEDICAL GAZETTE, Oct. 13, 1848, p. 637.

Medical Intelligence.

RELATIVE MORTALITY FROM CHOLERA IN THE DISTRICTS OF THE METROPOLITAN WATER COMPANIES.

PARTS of London are imperfectly supplied with water; some streets obtain their supplies from wells, pumps, and ditches; but the greater number of the houses have tanks, into which the waters of the Thames, Lea, Amwell, and Ravensbourne, are discharged at certain intervals.

Grand Junction Company.—The waters of the Thames at Kew supply the sub-districts of Paddington, Hanover Square, and May Fair, and the greater part of the district of St. James, Westminster. The mortality from cholera was at the rate of 10 in 10,000 inhabitants. The lowest rate was 6, the highest 16 in 10,000.

West Middlesex Company.—The waters of the Thames at Hammersmith supply Marylebone and Hampstead. The mortality from cholera was at the rate of 17 in 10,000 inhabitants. In Hampstead the mortality was 8 in 10,000.

Chelsea Water Company.—The waters of the Thames at Battersea, much below Battersea Bridge, and below the Chelsea Hospital, supply the Belgrave sub-district of St. George, Hanover Square, and the districts of Chelsea and Westminster. The mortality from cholera was at the rate of 56 in 10,000 inhabitants; in the Belgrave sub-district the deaths from cholera were 31, in Chelsea 55, in Westminster 71, in 10,000 inhabitants.

Southwark Company.—The waters of the Thames at Battersea—still lower down the river—supply the districts of Wandsworth, St. Olave, and Bermondsey. The mortality was at the rate of 156 in 10,000. In Wandsworth the mortality was 111, in St. Olave 183, in Bermondsey 194, in 10,000.

Lambeth Water Company, and Southwark Water Company.—The waters of the Thames between Waterloo Bridge and the Hungerford Suspension Bridge supply parts of the districts of Lambeth, St. Saviour, St. George Southwark, Newington, and Camberwell; the other parts of these districts being supplied from Battersea by the Southwark Company. The mortality from cholera was at the rate of 131 in 10,000. In the district of Lambeth the mortality was 115, St. Saviour 166, St. George Southwark, 168, Newington 145, Camberwell 102, in 10,000.

Southwark and East Kent Water Companies.

—Rotherhithe is supplied by the waters of the Thames from Battersea, and of the Ravensbourne, and partly from ditches and wells, into some of which the drains and cesspools soak. The mortality from cholera was at the rate of 268 in 10,000 inhabitants.

East London Water Company.—The Lea supplies the districts of Poplar, Stepney, Bethnal Green, St. George-in-the-East, and Whitechapel, with water. The mortality from cholera was at the rate of 69 in 10,000 inhabitants; and 49 in Stepney, 95 in Bethnal Green.

New River Water Company.—The Amwell and the Lea supply water to Islington, Shoreditch, St. Luke, Clerkenwell, London City, West London, East London, Holborn, St. Giles, the Strand, St. Martin-in-the-Fields. The mortality from cholera was at the rate of 48 in 10,000 inhabitants; the mortality was least in Clerkenwell (19), near the head reservoir; greatest (96) in West London, on the edge of the Thames.

The Table affords the means of investigating the effects of elevation of soil (which is a good index to the natural drainage), of density of population, and of poverty, which is expressed by the lowness of the rating of the houses, or still more closely by the average cost per head of house and shop rent. Arranging the 12 groups of districts in the order of mortality, it appears that the mortality from cholera was lowest—or 10, 17, and 23 to 10,000 inhabitants—in districts which have their water chiefly from the Thames so high as Hammersmith and Kew. Upon the other hand, the mortality was highest—or 131, 156, and 268 to 10,000 inhabitants—in the districts which have their water from the Thames so low as Battersea and the Hungerford Bridge. The districts of the New River occupy an intermediate station.

For those unacquainted with the Thames it is necessary to state that the contents of the greater part of the drains, sinks, and water-closets of 2,200,000 people, after stagnating in the sewers, are poured daily into its waters, which spread over more than 2000 acres in the midst of the inhabited parts, and are incessantly agitated by the tides, which ascend to Teddington, and carry the matters in the thickest waters below London Bridge, a mile and a half above Battersea Bridge, twice a day. The large Chelsea sewers open into the Thames above the point at which the water is taken up from the Thames by the Southwark and Chelsea Water Companies; but the suction pipe of the Chelsea Company extends into the centre of the stream. The water, it is said, is filtered by all the Thames Water Companies.

MEDICAL AGREEMENTS. ACTION FOR NON-OBSERVANCE OF AN AGREEMENT RESPECTING LIMITS OF PRACTICE.

AN action of some interest to the profession (*Atkins v. Kinnear*) was tried on the 12th inst. in the Court of Exchequer.

The plaintiff sought to recover the sum of £1000 as liquidated damages, stipulated in a covenant, for the alleged breach of that covenant in a deed of partnership, whereby the defendant, Dr. Kinnear, bound himself not to reside, or to practise, within a distance of *two-and-a-half miles* of No. 28, Dorset Crescent, New North Road. The defendant pleaded that he did not reside within the prescribed distance.

The evidence went to show, that the defendant had, upon an agreement for a stipulated sum, first taken the plaintiff into partnership in 1844, and had subsequently retired altogether from the practice, in Dorset Crescent, having bound himself by a covenant in the deed, in the sum of £1000, not to carry on the business of a surgeon-apothecary or surgeon-accoucheur within the distance of two miles and a half of the usual public ways and streets of Dorset Crescent; and there was another covenant, by which he undertook not to "reside" within the limits of the distance named,—with the reservation, however, that he might prescribe as a physician within the said distance. Dr. Kinnear, the defendant, took up his "residence" at 44, Trinity Square, Southwark, which it was contended was within the prescribed limits; and for this infraction of the agreement the action was brought.

A surveyor was called, who proved that the measurement between the two houses by the carriage-way was 310 feet within the two and a half miles; and that taking it by the foot-path it was 254 feet within that limit. This was by the ordinary and nearest line of road. Another surveyor proved that he had made it 359 feet short of the two and a half miles. A measurer of disputed cab fares also proved that it was 45 yards short of the prescribed distance. The only defence was, that there was another way sometimes taken by omnibuses, which made the distance greater, and took it out of the limits. The jury returned a verdict for the plaintiff, damages £1000. A point of law was reserved in the defendant's favour.

. This case shows that the covenants entered into by medical men regarding limits of practice should be most scrupulously observed. A few yards more or less may make all the difference in the verdict and costs of suit.

EDINBURGH ROYAL INFIRMARY.

A GENERAL meeting of the contributors to the Royal Infirmary of this city, was recently held in the Council Chambers, for the purpose of receiving the report of the Directors for the past year.

The Lord Provost occupied the chair, and having stated the object of the meeting, called upon the secretary to read the report, of which the following is a short abstract of that portion which has any medical interest:—

After showing by a tabular statement that the number of patients under treatment during the past year amounted to 4,006, of which 726 of fever, and 132 of cholera, of each of which 88 had proved fatal, the report stated that the average daily number of patients in the house had been 322—the greatest number at any one time being 350, and the lowest number 280. The abstracts now given show, when compared with the two immediately preceding years, a marked diminution in the number of patients. In 1846-7, the numbers were 7,706, and in 1847-8, 7,766; so that the year which closed on the 1st of October presents, in favourable contrast with its predecessors, a decrease of about 3,700. For the first time for many years past, the managers find themselves in a position to report that the ordinary expenditure is within the limits of the ordinary income.

GLASGOW ROYAL INFIRMARY.

THE annual public meeting of the qualified contributors to the Royal Infirmary was recently held in the Merchants' Hall.

The report presented to the meeting is a long and elaborate document. We subjoin a few of its salient points:—

"In the medical and surgical department, the number of patients remaining on the first January, 1849, was 179. There have since been admitted 2,043, making a total of 2,222. Of these, 1,808 have been cured, relieved, or dismissed from other causes, 236 have died, and there remained in this set of wards on 1st January, 1850, 178 cases.

"The number of patients remaining in the wards of the Fever Hospital on 1st January, 1849, was 71. There have since been admitted 655, making a total of 726. Of this number, 555 have been dismissed as cured, 127 have died, and there remained in this department on 1st January, 1850, 44 cases.

"In the wards which were appropriated for the treatment of cholera the number of patients at the commencement of the past year was 22. There were subsequently admitted, prior to the 10th March, when

these wards were closed, 117 cases, making a total of 139. Of this number, 71 were cured and 68 died.

"It follows, therefore, that the number of patients remaining on 1st January, 1849, was 272. There have been admitted during the year 2,815 patients, making a collective total of 3,087. Of this number, there are 2,865 whose cases have been treated to a conclusion: and of these, 2,434 have been cured, relieved, or dismissed for other reasons, 431 have died, and the whole number remaining in the house on 1st January, 1850, was 222.

"As estimated for the whole year, the daily average number of patients has been 200.

"The number of persons who received medical advice at the dispensary throughout the year amounted to 4,406."

GLASGOW ROYAL LUNATIC ASYLUM.— ANNUAL MEETING.

THE thirty-sixth annual meeting of the subscribers to the above institution was held on Thursday in the Religious Institution Rooms, South Hanover Street, the Honourable the Lord Provost in the chair.

After the usual preliminaries, Dr. McIntosh, physician to the establishment, read the report of the Committee, of which the following is an abridgment:—

Numerical Annual Statement.

	Males.	Females.	Total.
Remaining in the Asylum, Jan. 1, 1849.	284	234	518
Admitted since	211	167	378
Total	495	401	896
Dismissed cured	111	94	205
Dismissed relieved	67	33	100
Died	52	52	104
Total	230	179	409
Remaining Dec. 31, 1849	265	222	489
Total	495	401	896
Average daily number	265	217	482

The deaths this year would have been less than the average if the cholera had not unfortunately prevailed in the Asylum; and therefore from the above number 69 should be deducted, as this number died from that epidemic.

The greatest number on any day throughout the year was 512 on the 1st of January, and the lowest number occurred also in January, and was 458.

CHARING CROSS HOSPITAL.

It appears that during the past year 18,500 patients were admitted on the books of the hospital, and relieved at an expense of £2,458. This exceeds by 3,000 the number of persons relieved in the preceding year, and shows that the sphere of the hospital's usefulness has been greatly extended. Of those by whom the benefits of the institution have been received, 1,116 were in-patients, and 17,384 out-patients, making a total of 187,768 indigent sick relieved since the establishment of the hospital in 1818. The number of patients treated on recommendatory letters from governors and subscribers during the year appears to have been 1,496, while no less than 17,004 persons were freely admitted to the advantages of the institution, without any recommendation whatever. The details furnished by the statement before us of cases of accident and sudden injuries are curious, and better, perhaps, than anything else illustrate the benefits which hospitals confer upon the inhabitants of a city like London. It appears that the cases of accident and emergency have amounted during the year to 2,373. Of these 106 were from falls; 10 from the falling of excavated earth, buildings, and heavy weights; 20 from injuries caused by machinery; 207 from accidents arising out of the traffic of the streets; 99 from burns; 7 from the effects of immersion in water, of taking deleterious articles, and of inhaling noxious gases; 29 from bites of dogs, cats, &c.; 292 from personal violence; 21 from attempted suicides; 1,521 from cuts and other slight accidents; 45 from apoplexy, epilepsy, and diseases of that class; and lastly, 16 from hernia, hemorrhage, and such like. It appears that of the out-patients during the year, 17,135 have been cured and relieved, 47 died, and 202 are still under treatment; of the in-patients, 904 have been cured and relieved, 100 have died, and 112 are still under treatment.

MACCLESFIELD MEDICO-ETHICAL SOCIETY.

THE members of the Macclesfield Medico-Ethical Society held their first annual meeting at the Macclesfield Arms Hotel, on Wednesday evening, January 9th. Twelve gentlemen were present on the occasion.

The chair was very ably filled by Mr. Milner, the President of the Association, and the evening was passed most cordially and agreeably.

The sentiments expressed on the occasion were highly complimentary to the retired members in this locality, and indicated a high moral purpose on the part of the speakers to promote the dignity and efficiency of the profession.

HEADS OF A BILL FOR MEDICAL REFORM.

BY PROFESSOR SYME, EDINBURGH.

1. THERE shall be established a Council, to be called the "Medical Council," and to be charged with regulating the Education for General Medical Practice.

2. The Council shall consist of twelve Members of the Medical Profession appointed by her Majesty, with advice of her Majesty's Privy Council—six being resident in England, three in Scotland, and three in Ireland.

3. The Members of the Council shall continue in office during her Majesty's pleasure, and in the event of vacancies occurring, shall have their places supplied as originally.

4. The Council shall choose one of their number for Chairman, preferring the senior in case of an equality of votes; and shall also appoint a General Secretary, with Local Secretaries for Scotland and Ireland.

5. The Members of the Council shall be remunerated for their loss of time and travelling expenses; and the Secretaries shall receive salaries, to be regulated by Government.

6. The Medical Council, within a specified period, shall determine, (1). The Amount of Preliminary Study to be required before the commencement of Professional Education; (2). The period of Medical Study to be required from Candidates; (3). The Courses of Lectures or other Exercises necessary for their Education; (4). The Schools of Medicine and Surgery to be recognised as affording the necessary qualification; and, (5). The lowest age at which the License for General Practice should be given.

7. The Medical Council, within a specified period, shall sanction or constitute in London, Edinburgh, and Dublin, Examining Boards from the Colleges of Physicians and Surgeons, the Societies of Apothecaries in London and Dublin, and the Faculty of Physicians and Surgeons in Glasgow, for bestowing the License of General Practice.

8. The Examiners shall be appointed by the different Bodies on whose part they act, and shall conduct their proceedings in conformity with regulations sanctioned or established by the Council.

9. The Members of the Council shall be empowered to be present at, and also to inspect the Records of, Examinations for the License of General Practice.

10. The Council shall make an equitable arrangement for the division of the License among the different bodies of Examiners.

11. The Council shall make a List of the

Act; together with those actually engaged in practice previously to its enactment, with a qualification from at least one of the legally recognized bodies; setting forth the degrees, diplomas, or other honorary distinctions they may have acquired.

12. All the persons thus registered shall have the free right of practising Physic, Surgery, and Obstetrics, with or without the dispensing of Drugs, in any part of her Majesty's dominions.

13. The Council shall be empowered to erase from the Register the Names of Persons judicially convicted of felonious acts.

14. There shall be Penalties exacted by summary process for assuming without due authority any title contained in the Register; and also for engaging in Medical or Surgical Practice without a License.

15. All previous Acts and parts of Acts inconsistent with the above mentioned provisions, shall be repealed.

16. The expense incurred by the Medical Council shall be defrayed from fees paid for registration.

Selections from Journals.

CASES SHOWING THE EFFECTS OF CERTAIN MEDICINAL AGENTS ON THE HEALTHY BODY.

1. A CHILD, six years of age, was suddenly seized with headache, giddiness, impaired vision, and delirium. The countenance was flushed, the pupils dilated, the pulse rapid; there was great thirst, the tongue was dry, the abdomen distended, the epigastrium not tender.

Poison being suspected, an emetic was given. Among the vomited matters were found henbane seeds. Other means also being employed, the child was restored to health in a few days.

2. A young pregnant woman was advised by a quack to take, for rheumatism, an aloetic mixture. She boiled three ounces of aloes in a pint of wine in an untinned saucepan, and let the mixture stand from the evening until the following morning in the same vessel, and then drank a cupful. She was shortly afterwards seized with violent pain in the abdomen, nausea, vomiting, stranguary, urgency to stool, tenesmus, tremors, and syncope. This patient recovered under treatment.

3. A child, five years of age, was seized early one morning with vomiting, colic, diarrhoea, and tremors. On inquiry it was found that on the preceding evening the child had mistaken the seed pods of common autumnal beans, and had eaten a great quantity of the seeds. She was restless, the face of a bright red colour; she cried

much, and the evacuations resembled shreds of membrane. An emetic of sulphate of zinc did not bring away the poison in question. Decoction of bark was given by the mouth and in enemata, with a view to destroy the vegetable alkaloid. Camphor also was exhibited, and on the following morning all signs of poisoning had disappeared. It was remarked that the urine had a mousy smell, similar to what is observed in some cases of typhus. It had an alkaline reaction, and deposited the ammoniac-magnesian phosphate, and it also contained albumen.

4. A child, four years old, ate some berries of the belladonna. In the course of the night he was seized with extreme restlessness, feverishness, and constant retching. The medical attendant, not knowing the cause of the symptoms, administered a little magnesia. As the symptoms did not abate, the parents produced some of the berries, and inquired if they could have caused them. The patient tossed about in bed, was much convulsed, the eyes staring, the pupils dilated. No trace of intelligence remained, but he would repeat rapidly and with cheerfulness single phrases and verses of songs. He swallowed fluids eagerly, but they were quickly returned. The tongue was covered with a greenish fur. Decoction of oak bark was given, as an antidote, both by the mouth and as enemata; the latter brought away only mucus, with a few of the berries, mingled with seeds of white poppy, which the child had likewise eaten the day before. An emetic was also given. Towards evening some signs of amendment were apparent. Pulsatilla was exhibited, and in the course of three days the recovery was complete.—*Casper's Wochenschrift*, Aug. 1849. x

BOOKS & PERIODICALS RECEIVED DURING THE WEEK.

- On Diseases of the Kidney connected with Albuminous Urine. By G. Owen Rees, M.D. F.R.S. &c.
- On Pulmonary Tubercle. By D. Cronin, M.D.
- An Essay on Intestinal Auscultation. By Charles Hooker, M.D.
- The Journal of Health and Disease. Nos. 5, 6, 7.
- Report of the Proceedings of the Pathological Society of London. 3d Session, 1848-49.
- Contributions to the Physiology of the Alimentary Canal. By Wm. Brinton, M.D. Lond.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.38
Thermometer " 50.3
Self-registering do. " Max. 0.0 Min. 12.8
* From 12 observations daily. * Sun.

RAIN, in inches, 0.0.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 6° below the mean of the month.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, Jan. 12.

BIRTHS.		DEATHS.		Av. of 5 Awd.	
Males....	688	Males....	503	Males....	563
Females..	681	Females..	562	Females..	579
	1369		1065		1162

CAUSES OF DEATH.

ALL CAUSES	1065	Av. of 5 Awd.	1162
SPECIFIED CAUSES	1056		1158
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	185		307
Sporadic Diseases, viz.—			
2. Dropsy, Cancer, &c.	41		49
3. Brain, Spinal Marrow, Nerves, and Senses	114		125
4. Heart and Bloodvessels	52		40
5. Lungs and organs of Respiration	255		214
6. Stomach, Liver, &c.	52		65
7. Diseases of the Kidneys, &c.	13		11
8. Childbirth, Diseases of Uterus, &c.	9		10
9. Rheumatism, Diseases of Bones, Joints, &c.	9		8
10. Skin	4		1
11. Old Age	69		57
12. Sudden Deaths	8		12
13. Violence, Privation, Cold, &c.	22		36

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	11	Convulsions.....	26
Measles.....	36	Bronchitis.....	139
Scarlatina.....	11	Pneumonia.....	62
Hooping-cough.....	28	Phthisis.....	149
Diarrhoea.....	19	Lungs.....	10
Cholera.....	0	Teething.....	5
Typhus.....	33	Stomach.....	6
Dropsy.....	16	Liver.....	11
Hydrocephalus.....	30	Childbirth.....	6
Apoplexy.....	37	Uterus.....	0
Paralysis.....	28		

REMARKS.—The total number of deaths was 88 below the mean weekly mortality of the second week in January, taken on an average of the last ten years.

NOTICES TO CORRESPONDENTS.

Communications have been received from Mr. Clapp, Dr. Trayer, Mr. Garlick, Dr. Hall, and Mr. Teale. These will have early insertion. Dr. Bentley's request shall be attended to. We are obliged to Mr. Syme for a copy of his Heads of a Bill for Medical Reform, elsewhere inserted (page 131). We will take an early opportunity of noticing the subject.

RECEIVED.—Mr. Barrett.

CORRECTOR.—In Mr. Efferton's paper on Traumatic Tetanus in our No. of Dec. 21.—Page 1074. col. 2, line 24 from bott., for "fomented," read "repeated."—P. 1073, col. 1, lines 33 and 34 from bottom, for "abdominal muscles," read "abdomen."—Last line, same col., for "legs," read "legs."—Col. 2, same page, line 15 from bottom, before the word character, for "clonic," read "tonic."

OBSERVATIONS
ON THE
TREATMENT OF NÆVI MATERNI,
WITH CASES OF REMOVAL OF THESE
GROWTHS FROM DIFFERENT PARTS
OF THE FACE WITHOUT
DEFORMITY.

By T. B. CURLING,
Surgeon to the London Hospital, &c. &c.

CONGENITAL nœvi present so many varieties, depending partly on structure and partly on situation, that the remedies employed for their removal are necessarily numerous; and, whilst some are easily got rid of by simple means, others offer great difficulties, and require varied and skilful treatment for their extirpation. When these growths are developed in different parts of the face, the difficulty of removing them is often much increased; for the importance of preventing disfigurement of the countenance prevents the surgeon attacking them in ways which, though effectual, necessarily involve the destruction of the parts affected.

The treatment applicable to nœvus must be adapted to its form, according as the growth is cutaneous, or the bright scarlet kind; subcutaneous, or a livid puffy swelling; or mixed, partaking of the characters of the cutaneous and subcutaneous. Although their external appearance differs considerably, the true structure of the several kinds of nœvus is essentially the same. In the cutaneous, the progress of the disease is comparatively slow, owing to the resisting texture of the skin; but this part is so much involved that it is seldom possible to obliterate the growth without the destruction of a superficial layer of the cutis and the formation of a glistening scar. In some instances after inflammation in the part, or more rarely spontaneously, the bright scarlet appearance fades, and the skin gradually assumes its natural hue. But when a cutaneous nœvus is steadily increasing, we must not calculate on this favourable result. In these cases, if the growth be small, and not very prominent, the best mode of getting rid of it is by the application of a powerful escharotic, as the strong nitric acid. If the nœvus be of some size, and project, and particularly if it be situated in a part where

the areolar tissue is abundant and the skin yielding, as the neck or labium (which latter is not an uncommon place), the most effectual plan is to strangulate the growth, either singly or in two, four, or many parts, according to the extent and form of the growth. The removal of a nœvus in this way causes a small scar, but the mark is much less evident than would be expected from the size of the tumor, and, after the lapse of a few months at the growing period, is often barely perceptible. In cases in which the nœvus is not adapted for tying, owing to its situation on parts which cannot well be destroyed, or where the skin is adherent, the disease may be extirpated by an operation, I believe, suggested by Sir B. Brodie—viz. subcutaneous cauterization. A very small knife—a fine tenotomy one will answer the purpose—is to be introduced through the sound skin at the side of the tumor, and, being passed into its middle, is to be moved about so as to lacerate the morbid tissue in all directions. A fine-pointed probe coated with the nitrate of silver is then to be inserted at the small wound, and freely applied to the lacerated part. The application effectually stops the bleeding, which, if not arrested by the pressure of the finger, is generally profuse. It produces inflammation, which leads to obliteration of the nœvus. It sometimes causes ulceration or a small slough of the part, which more certainly secures the removal of the morbid tissue.

The treatment of subcutaneous nœvus must be conducted somewhat differently from the preceding: it spreads more rapidly than the cutaneous, and generally requires to be attacked without delay; yet even this form of nœvus is sometimes stationary, and, after remaining in an indolent state for some months, may dwindle into a small puffy swelling of no importance. I have occasionally excised from adults a swelling, the progress of which had thus ceased spontaneously. Subcutaneous nœvi can often be got rid of without destruction of skin, and consequently without any deformity. The principle upon which this is effected, is the excitement of inflammation in the reticular tissue, and its consolidation or obliteration by the effusion of lymph. The chief obstacle to success is the indispotion of this tissue to inflammatory action. It may be freely cut up, and

otherwise actively treated, without more inflammation being excited than is sufficient to repair the mischief and to stop the spreading of the disease for a brief period. Various methods of exciting inflammation are practised: the injection of stimulating fluids; the introduction of setons; the subcutaneous application of the nitrate of silver, &c. The plan of passing numerous setons through the tumor has several advantages. It can be used in all cases and in all situations: its effects can be regulated by the period during which the threads are retained, as well as by moistening them with stimulating liquids. It produces no scar, causes but little suffering, and is a pretty effectual remedy. It occasionally fails, and then other means must be resorted to.

The mixed is a common form of nævus, and the most difficult to treat. The subcutaneous portion may be obliterated by the passage of setons; after which the cutaneous will require to be destroyed by escharotics; but as this double process involves a destruction of skin and the formation of a scar, I generally prefer, if the tumor be not of considerable size, having recourse at once to the ligature, as the most certain and effectual treatment. A mixed nævus situated on the face may sometimes be advantageously removed by the subcutaneous ligature described in the treatment of Case II. In this mode a strong ligature is carried around the base of the tumor immediately beneath the sound skin at its border, and strangulation of the growth is effected without slough or destruction of the integuments. The subcutaneous part of the nævus is effectually destroyed by inflammation and suppuration; and the passage of blood into the cutaneous portion being in a great degree intercepted by constriction of the tissue beneath, this part fades and disappears, whilst the nourishment which it receives from the circulation in the adjoining skin prevents it from perishing. This mode of applying a ligature is applicable to many cases of simple subcutaneous nævus. It is less painful than, and in other respects preferable to, the plan sometimes adopted of dividing the skin around the growth before strangulating it with a ligature.

Many of the modes of treatment to which I have adverted were employed in the following cases. In some of

them the removal of the nævus might have been effected in less time, and with greater decision, had not the preservation of the part in which the disease was developed been of considerable moment. It will be observed that these cases offered serious difficulties, which were surmounted, however, by different plans and remedies without disfigurement of the countenance.

CASE I.—Subcutaneous nævus of the right external ear—failure of setons—cure by subcutaneous cauterization, compression, and ligature, without injury to or disfigurement of the ear.

Emily Dowley, a little girl ten months old, came under my care at the London Hospital in March, 1840, on account of a nævus affecting the lower half of the right ear. It was first perceived by the mother six months previously, when it commenced as a small speck, which rapidly increased until it involved half the concha, and all the lower part of the auricle, including the lobe. There was a considerable swelling both externally and towards the head, the morbid tissue being developed beneath the skin on both sides of the cartilage, so that the part affected was full three times its natural thickness. Towards the meatus there was a slight scarlet mark from affection of the skin, but elsewhere the swelling was of a livid hue, the nævus being subcutaneous. As the disease was spreading daily, it was necessary to adopt at once some method for checking its growth. Being desirous if possible to cause obliteration of the diseased structure without injury to the ear, I passed three setons of double silk threads through different parts of this irregular nævus. Having excited inflammation in the part, they were removed on the fifth day. After the inflammation had subsided, the nævus was somewhat smaller, and its extension appeared to be arrested; but this lasted but a short time, for when the sores produced by the setons had quite healed, the swelling returned, and soon began again to increase. Fresh setons were twice passed through different parts of the diseased mass, but with no better result than on the first occasion, although firm pressure, with compresses of lint and strapping, were steadily maintained for some time after the removal of the threads. I next introduced a narrow-bladed bistoury into

the swelling, and having freely lacerated the tissue subcutaneously, inserted the point of a probe coated with solid nitrate of silver into the wound, which immediately stopped the bleeding. This was done in three different places. A good deal of inflammation ensued, and the nœvus was partly obliterated by the treatment. I now got an instrument-maker to contrive a machine for making continued pressure on the part. This consisted of two small oval plates of steel, defended by wash leather, and connected by two screws at the extremities, by turning which the part placed between the plates could be subjected to pressure. This was applied to the lower half of the ear, and included the whole of the morbid growth, with the exception of a small part towards the meatus, and firm pressure was steadily maintained for three days, when, in consequence of the skin being inflamed, and exhibiting a tendency to slough, the instrument was removed. A small piece of skin, both on the outer and inner part of the auricle, sloughed. After separation had taken place, and the sores had healed, the nœvus was found considerably reduced. In the course of three or four weeks afterwards I found that the portion of the nœvus towards the meatus which could not be included in the instrument became prominent, and was evidently spreading. This projecting part was of the mixed kind. I passed a pin through its base, and encircled it tightly with a ligature. After the separation of the strangulated part the sore quickly healed. Very little of the nœvus remained after this operation. There was in places a slight puffiness and faint livid hue, which indicated that the morbid growth was not wholly eradicated. To prevent, therefore, a return of the disease I kept up gentle but steady pressure on the part by means of a convex compress of cork, cut to fit the hollow of the ear, defended by lint and retained by strapping. This was continued for several weeks, until all trace of morbid growth had disappeared. The nœvus was thus cured without injury to the form of the ear, the only mark remaining being a slight superficial scar. The treatment was necessarily tedious, and occupied several months. The child suffered very little in health from the various operations, and the mother seconded my efforts with much perseverance.

CASE II — *Mixed nœvus of the lower eyelid—failure of setons—cure by subcutaneous ligature, without disfigurement or loss of skin.*

A healthy female infant, æt. 10 months, was brought to me as an out-patient at the London Hospital, March 23d, 1842, on account of a nœvus of the lower eyelid. It was of the size of half a walnut, and occupied the whole lid, causing a soft puffy swelling of a livid hue at the circumference, but of a bright scarlet granular appearance in the centre. The mother stated that she observed a red spot, about the size of a pin's head, four weeks after birth, and that this continued steadily to increase until the nœvus reached the size just described. She also said that the child had been under the care of a surgeon three or four weeks, and that he had burnt the part several times, but without arresting the morbid growth. I passed two setons, each consisting of four silk ligatures, one a little distance below the other, transversely across the lid, through the centre of the tumor.

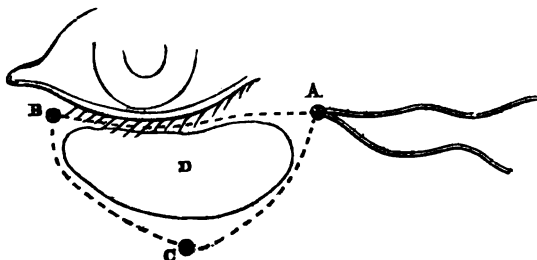
March 25th. — The lid was more swollen, and the skin red and inflamed. The infant had been rather restless.

April 5th. — Finding that the setons were producing very little irritation, I removed them, and dressed the part with compression.

20th. — The nœvus having been but very slightly reduced in size by the passage of the setons, I determined to try strangulation of the morbid growth by a subcutaneous ligature, it being very desirable to get rid of the disease, if possible, without producing a scar or loss of skin, which might cause eversion of the lid or disfigure the countenance. For this purpose I took a slightly curved needle, armed with a strong silk ligature; and, inserting it at the outer margin of the lid, passed it close beneath the skin transversely across, near the margin of the palpebra, bringing it out at the inner side of the swelling. I then re-inserted it at the point of exit, carrying it in like manner close underneath the skin downwards, and brought it out below the lowest part of the nœvus. The needle was again introduced at the second point of exit, and carried upwards beneath the skin to the point at which it was first inserted, thus encircling subcutaneously the whole of the morbid growth. The ligatures were then drawn tight, and

the ends secured by a firm knot, and left long. The accompanying figure

shows the mode in which the subcutaneous ligature was applied.



A, point at which the ligature was introduced; B, point at which the ligature was brought out and again inserted; C, second point of exit and third of insertion; D, tumor. The dotted line marks the course of the ligature subcutaneously.

Immediately the ligature was tied the tumor contracted considerably, but was rendered more prominent, and the skin around was slightly puckered. The operation was followed by inflammation and œdema of both lids, an increase in the size of the tumor, and slight feverishness and restlessness.

23rd.—In order to hasten the separation of the ligature, the ends were attached to a piece of stick, which being twisted tight was confined to the temple by strips of adhesive plaster. A poultice was applied to the lid. The ligature was twisted daily until the 27th, when it came away. The child continued irritable and restless up to this time. The orifice was slightly ulcerated, and there was a cavity left, which discharged freely. This remained fistulous for three weeks, the mother being very irregular in her attendance. I afterwards persuaded her to bring the child every day; and then, by daily dressing, with compression, I got the fistula to close in the course of a week. The mother subsequently neglected attending the hospital; but the child was visited at home by Mr. Southeron, an intelligent pupil, who saw her six months after the operation, and reported that the nævus was wholly got rid of. The lid felt at one part a little solid, but was of its natural appearance, all redness having disappeared. There was still a little tumefaction perceptible, but this was gradually subsiding.

Notwithstanding the failure of the setons in the case just detailed, I have so seldom been disappointed in procuring the obliteration of subcutaneous nævi of limited extent in infants by this

plan of treatment, that I was induced to try it again in the following case of nævus of the same part; and, as was confidently expected, with a satisfactory result.

CASE III.—Mixed nævus of the lower eyelid cured by setons and the application of nitric acid.

April 4th, 1844.—A healthy boy, aged four months, was sent to me by Mr. Buchanan, of Ratcliffe, with a subcutaneous nævus occupying the whole of the lower eyelid, and a bright red spot on the skin over it about the size of a fourpenny piece. The nævus was increasing rapidly. I passed three setons, each consisting of double silk threads, in a transverse direction, from one extremity of the lid to the other, at slight intervals, and afterwards tied their extremities loosely together to prevent their slipping out. They produced inflammation and swelling of the lid, and were removed at the end of a week. The child was brought to me again at the end of another week, when I found the livid appearance quite gone, and the swelling nearly reduced. The sores produced by the setons were all healed except one. Some strong nitric acid was applied to the superficial scarlet mark. After four days the child was brought to me again. The superficial slough was partly separated, and none of the scarlet mark remained. I did not see the child again, but heard that some weeks afterwards he had hooping-cough, and died. Mr. Buchanan wrote me word, however, that "the operation succeeded perfectly. There was no vestige of the disease, and only the slightest scar."

CASE IV.—*Large mixed naevus, involving one half of the upper lip—cured by sutures, ligature, and subcutaneous cauterization, without deformity.*

In November 1846, I saw, with Mr. Llewellyn, of Mount Place, Whitechapel, rather a delicate little girl, two years of age, who had a large mixed naevus occupying the left half of the upper lip. It commenced a little beyond the septum, and involved the whole of the substance of the left half of the lip, as far up as the nose, producing a puffy thickening of the part, a swelling of the mucous membrane into the mouth, and forming some ugly flaps which projected considerably from the red margin of the lip from the septum to the angle of the mouth, and causing altogether great disfigurement of the face. The lip was partly livid, and partly marked with the usual scarlet growth. The latter extended a little way up the left nostril. The naevus had existed from birth, but it was then much smaller in size. As it was increasing rather rapidly, the friends became anxious that something should be done to stop its growth.

Nov. 25th.—I passed eight separate setons, consisting of two silk threads each, transversely through the lip and morbid growth, at short distances from each other. They produced inflammation in the part, and were removed at different times, but were all taken out by the eighth day after their introduction. After the aperture of the setons had closed, compression of the part was kept up for some weeks by means of strapping and dossils of lint. The result of this treatment was to cause consolidation of the substance of the lip and a diminution of the swelling, but it had very little effect on the projecting flaps and on the scarlet portion above.

Jan 4th, 1847, about six weeks after the first operation, two pins were passed through the base of the flap, close to the border of the lip, and the whole of the projecting growth was tightly strangulated by ligature. This produced a little inflammation in the neighbouring parts, and slight irritative fever. The slough having separated, the wound healed favourably. By this operation a large portion of the naevus was removed, and the child's appearance was greatly improved.

Feb. 8th.—The little girl's health having become fully established, I proceeded to get rid of a mass of bright scarlet naevus occupying the upper part

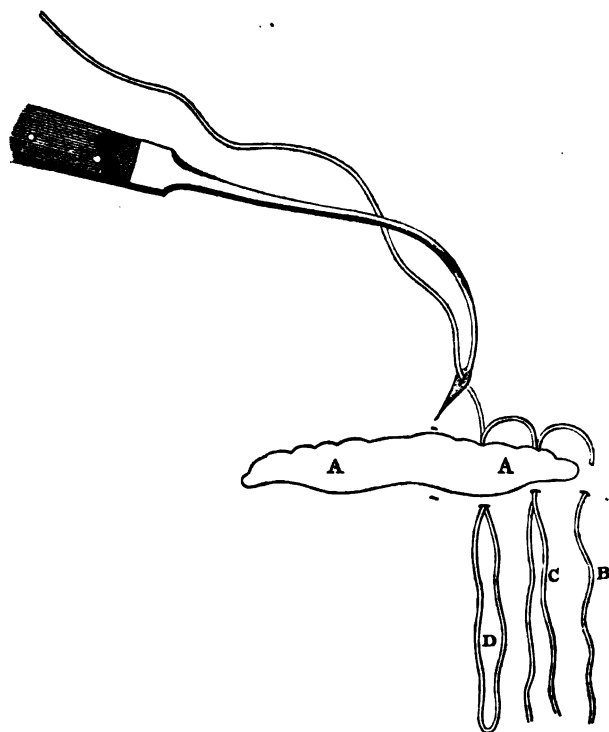
of the lip towards the nostril, and also extending deeply into the substance of the lip. For this purpose I took a very small tenotomy knife, and plunging it into the morbid tissue, freely cut up and divided the part in every direction, and after withdrawing the instrument, introduced the fine extremity of a probe, coated with nitrate of silver, which was applied subcutaneously to the incised parts. The application instantly checked the bleeding, which profusely ensued instantly the knife was withdrawn. The operation was followed by slight inflammation in the part, and subsequently by the obliteration of the greater part of the remaining growth, the scarlet portion being destroyed in part by ulceration. It was necessary to repeat this operation in a milder degree before the whole of the naevus was destroyed: This was done March 2d. It will be observed that the various proceedings here related occupied a long period, as it was necessary not to disturb the child's health too much by the repeated operations, and also to wait a sufficient time to judge of the effect of each operation before determining upon any further steps. My attendance ceased at the end of April 1847. At this time the left half of the upper lip was rather more swollen than the right. It felt dense and consolidated, and its external surface presented the white glistening appearance of cicatrix intermingled with a few faint scarlet marks. I had no doubt that the appearance of the lip would gradually improve in the course of time, and on visiting my little patient in November 1849, three years after she first came under my care, I was gratified in finding this to be the case. All discolouration and thickening had disappeared. The substance of the lip had assumed its natural condition, and the only trace remaining was a slight appearance of cicatrization on the outer part of the left lip, and a small-sized prolabium.

CASE V.—*Large scarlet naevus of the lower lip, strangulated in seven distinct portions by ligature.*

In January 1849, a fine boy, eight months old, came under my care at the hospital, on account of a large projecting naevus, of a deep scarlet colour, forming a swelling which occupied the whole of the free border of the lower lip, extending from the margin in front, backwards to the gums, and affecting also the mucous membrane for a short distance within the mouth at the angles.

I managed to constrict the whole of this irregular mass by the ligature devised by my colleague, Mr. Luke.* In performing the operation, however, the ligature was passed in a more simple manner than that which he recommends. For instead of a number of needles, I used a single one, the curved needle set in a handle with the eye near the point, which is commonly sold for tying nævi. Being armed with a long and strong ligature, the needle was inserted at the base of the growth, within the mouth, and brought out externally just beyond the junction of the nævus with the healthy skin. As the point of the needle emerged, a loop of the ligature was drawn out a sufficient length to form, after being cut, ends for tying, and the needle remaining threaded was withdrawn, and again inserted at proper intervals from one angle of the

mouth to the other, terminating as it commenced, beyond the limits of the morbid growth with a single thread.† In this way the whole of the nævus was tightly strangulated in seven distinct divisions. Part of the constricted mass came away on the fourth day, and the remainder two days afterwards. The sore surface healed readily. When the cicatrization was completed, the mouth was somewhat contracted, and the lower teeth were exposed owing to the loss of the red labial border, which being wholly occupied by the morbid growth was necessarily destroyed. One or two scarlet points were perceptible, but they were fading when the patient was last seen, which was about a month after the closing of the wound. The mode of applying the ligature for tying the nævus will be understood by reference to the subjoined diagram.



A A A. Projecting nævus to be tied. B. Single ligature passed beyond the limits of the growth. C. Cut extremity of the first loop to form a knot with B. D. Third loop uncut.

* Vide MED. GAZ., vol. vi. N. S. p. 581.

† In passing the ligature in this case, having no other strong ligature at hand, I used dentists' silk, which getting entangled, and not gliding

easily through the eye of the needle, caused a little embarrassment. In other cases I have employed strong twine, and applied the ligature with great facility.

BED-SIDE SKETCHES.

BY JOHN CHARLES HALL, M.D.

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"Concordiâ res parvæ crescunt."

No. 1.—On a Case of Epistaxis.

Introduction.—In commencing the present series of papers, we may perhaps be permitted to remark that their title—Bed-side Sketches—has been selected as the one most expressive of their contents. What we have observed at the bed-side of the patients we have attended during a somewhat extensive field for observation, enjoyed for many years, has been regularly noted down from time to time; and it is now proposed, as announced at the conclusion of the past year, to publish, in the pages of the LONDON MEDICAL GAZETTE, an outline of some of the more interesting of those cases, filled up with such observations as may suggest themselves as we proceed.

As these clinical observations are recorded in the hope that those young men who are now standing at the portals of our profession may profit by their perusal, the medical student may here with propriety be reminded that much of his future usefulness will depend on his first making himself thoroughly acquainted with the healthy structure of the several parts of which the human body is made up. A knowledge of anatomy, physiology, chemistry, &c. must be obtained before he can hope to proceed satisfactorily with his examination of the body under the different aspects it assumes when suffering from disease. For example—in using the stethoscope, how is it possible to detect diseased conditions of the lungs until the ear has been taught to recognise the sounds natural to the chest in a healthy condition of the lungs and heart?

A knowledge of anatomy, physiology, chemistry, and *materia medica*, can be obtained in the lecture and dissecting rooms; but there is yet another book to be read and learnt with every care and attention before the medical profession can be practised with credit to

ourselves or with advantage to the public,—a book too often neglected; nor is it to be wondered at, when we call to mind the number of lectures a young student is compelled to attend, and the brief space of time he is in London, during which everything has to be accomplished, that the all-important book of nature is left unread, and the wards of our hospitals comparatively neglected. Wearied with attending lecture after lecture, and haunted by the remembrance that he has to prepare for his examination,—too often any thing rather than a practical test of his qualifications for practice,—or perhaps, in obedience to the present besetting fashion, or the present besetting sin of our medical schools, preparing to obtain what are called "prizes," or "*honorary certificates*,"—all his days, and half his nights, are devoted to a technical study of one or two subjects, to the neglect of every other. It has long been our opinion that until the examination, in part at least, for the diploma of our Colleges, is conducted at the bed-side of the patient, no sufficient proof can be afforded of the fitness of the candidate for the practice of his profession: nor ought we to despair of the ultimate accomplishment of the introduction of so desirable a test, now that clinical instruction is becoming so important an item, in the education of the student, in many of our medical schools and hospitals; although we cannot even yet plead "not guilty" to the charge of that distinguished physician, Dr. Graves, that the modern attention to the collateral sciences has a tendency to draw the mind too much from the more important field for observation which the bed-side presents.

At present, the mischief arises from a youth of twenty being called upon to attend far too many lectures at the same time; thus crowding too many subjects upon the dawning powers of the intellect, and taxing them beyond what they are able. We would not, however, be understood as holding up as patterns that class (so happily described by Professor Cruveilhier, in his address to the Anatomical Society) of self-elected practical men who speak ironically of theorists, "men of science or of the closet," such who labour most for the advancement of medical science, and whose knowledge crushes and confounds them. "These so-called prac-

tical men," he says, "are those who have no doctrine and no general principles, who gather together ready-made formulæ and isolated cases, without any kind of scientific discernment. The only medicine they study is that contained in small books of prescriptions, published in 12mo. and 24mo., which they carry in their pockets and know by heart. We have frequently had occasion to remark that a practical man—that is, a man who boasts of knowing nothing of scientific medicine—is a medical machine, inferior, intellectually, to a master mason, a locksmith, or a cabinet-maker, for these have principles they apply to their business." May we not also add, that the true eclectic works without conviction, without principle, without idea: he is continually enlarging his circle, in order to enclose within it facts of the most contradictory nature; he sacrifices in a sort to every god, creating a medical-Pantheism, as fatal to every principle of true science as Pantheism properly so called is to true religion. The man who supposes his studies are ended when he walks out of the College walls, with his diploma in his pocket, has evidently mistaken his mission: to be a useful practitioner, the winter of life must find him a student as well as its spring; and, if he need the encouragement of great names to urge him to exertion, let him look to our Brodie, Chambers, Williams, M. Hall, Christison, Dr. Watson, and a host of others, who have been students all their days, and who are successful practitioners, because they have kept pace with the knowledge of the day, or rather have marched in advance of it.

Lastly, we would most earnestly impress upon the student that, in the investigation of disease, no symptom that presents itself—no phase in the past history of the patient—is to be passed over as too trifling to require notice: it is only by observing the most apparently insignificant signs that the red man, who has lived all his days in the forest, discovers that friends or foes have passed near his hut. A torn leaf, a flattened blade of grass, a broken bough, a crushed flower, are things which the unpractised eye of the inhabitant of the city would hardly discover; and yet to the Indian they are all-important and conclusive. So in the treatment of disease: the most trifling symptoms are often of interest

and utility to the experienced practitioner, and are seized upon to assist in his diagnosis and treatment.

In June, 1847, I was requested to visit Mr. ———, æt. 49, an opulent farmer, residing in Nottinghamshire, as quickly as possible. The servant said "his master was bleeding to death from the nose, and that the bleeding had continued for some time." On reaching the house, I found Mr. ——— and his family in very great alarm; and certainly the quantity of blood lost was very large, and well calculated to cause the very great fears for his safety which they entertained. The blood was flowing from the right nostril in a small stream, and every three or four minutes a quantity which evidently flowed backwards into the throat was coughed up. I found Dr. Manners in attendance. Various remedies had been employed; amongst others, Ruspini's styptic, but without success; and although the nose was plugged from the posterior nares, the hæmorrhage was alarming; at least two and a half or three pints of blood having been lost. I advised that he should stand in the middle of the room, and in this position a vein was opened in the arm: four ounces of blood drawn from a very large opening produced fainting; the bleeding at once stopped, and happily did not return. Dr. Peacock, who was visiting a patient in the village, at my request very kindly called in, and gave us the benefit of his extensive experience.

Mr. ——— is a stout but not muscular man, aged 50; temperate in his habits, but somewhat inclined to be indolent. Height five feet ten inches; weight upwards of thirteen stones. He says that many years ago he used "at the spring of the year to feel full about his head, and was regularly bled,"—I believe once or twice a year. Has not been bled for some years. Was not bled, in consequence of my advising him to take opening medicine and more exercise, rather than, in obedience to his usual custom, to lose blood every year. Mr. ——— for the last thirty years has been subject to bleedings from the nose; they have never before been so large as to cause any alarm: before attacked his face always feels hot for a day or two; he has pain in his head, always relieved by the epistaxis. Has

enjoyed, upon the whole, a good share of health, with the exception of a severe attack of typhus fever; he was also once confined for a month to his bed by an attack of inflammation of the lungs.

The treatment at first consisted of bleeding, leeches, purgatives, sponging the body with cold water every morning, and then using the flesh brush, exercise, attention to diet, and the avoidance of every kind of mental emotion—one very severe attack having followed an altercation with a servant who had very much vexed our patient. During an attack care was always taken to keep the head raised. His system was also brought under the influence of mercury—for a time with advantage, although the hæmorrhage returned during the following spring; but the condition of the patient was soon altogether changed by these repeated severe attacks of epistaxis. His hands were white and cold—the full hard pulse of *sthenic hæmorrhage* was no longer present; on the contrary, the pulse was rapid, very feeble, and had a peculiar thrill. (This I once witnessed, also, in a case under the care of Mr. Babington, many years ago: it is always a valuable sign in patients where internal hæmorrhage is only guessed at; in some this thrill will be present even where the loss of blood had been comparatively slight, and where, on applying the stethoscope, no murmur is attendant on the sounds of the heart. This singular phenomenon is thought by Dr. Williams to arise from an unusual abruptness in the contractions of the heart, joined with an irregular tenacity of the different arteries, which cause them to react in successive jerks at each pulse, instead of simultaneously.) These bleedings returned once a month, sometimes twice in the same week, the quantity lost at each attack being considerable. Mr. — was reduced to a very weak condition, and was fearful of leaving his house or attending to any kind of business, as the epistaxis returned after the slightest exertion.

He was advised to go to the sea-side, but could not be induced to leave home, being fearful of an attack. All excitement was, therefore, strictly prohibited. His head was washed with cold water three or four times a day; he was not permitted to attend to business; he took gentle exercise upon a pony every day,

abstaining altogether from wine, spirits or malt liquor: various preparations of iron were exhibited, with a small dose of the bi-chloride of mercury every night for a month. Under this plan of treatment he has gradually improved, and a few weeks ago we had the pleasure of hearing from himself that there had been no return of the bleeding for more than a year.

It ought to have been stated that during one of these attacks the plan proposed by Dr. Negrier, of Angiers, was tried, but it was not successful: probably, as this case was a very severe one, and as we have only tried it in one case, it would hardly be fair to condemn it. To those who are inclined to give it a trial the method is very simple, and has the recommendation of doing no harm, even if it fail in the object for which it is undertaken. Dr. Negrier states, that during a period of three years it has always been successful. The person attacked with epistaxis is to raise one or both of his arms over his head, and to keep them raised for some time. Cloths dipped in cold water may at the same time be applied to them. For the *modus operandi* the reader must refer to the remarks of Dr. Negrier, although we do not promise that even there a very satisfactory explanation will be found.*

REMARKS.—This case of epistaxis, a brief outline of which we have given, suggests many points of practical importance—1st, as to the mode in which the hæmorrhage takes place, and the causes producing it; and 2d, as to the best mode of treating it when present, and preventing its return.

a. Source of epistaxis.

In the case under our notice we have observed that frequent attacks of bleeding from the nose took place, and it becomes a matter of primary interest to consider how this hæmorrhage occurs: can blood escape from the natural channels—can it exude from the unbroken surface of an organ, without the eye, even with the assistance of the most powerful microscope, being enabled to detect any rupture either in the arteries, veins, or capillaries? can hæmorrhage flow from the mucous membrane of the nose in

* Since the above remarks were written, a medical friend has informed me that in two or three cases of epistaxis under his care the plan of Dr. Negrier has succeeded.

the same way that mucus oozes from the inner surface of the bowels, sweat from the skin, or synovia and serum from the membranes by which these fluids are supplied?

The question of hæmorrhage by exhalation was most fully and ably discussed by Dr. Watson, in the Lumleian Lectures delivered at the Royal College of Physicians in 1832.* He contends that in a large proportion of these cases the flow of blood does not depend upon the rupture of any vessel, but that it is effused through those pores or outlets which afford a natural passage to the fluids secreted by the part, and to which the designation of exhalents has been given. The hæmorrhage he arranges into two classes:—

a. *Idiopathic*, or such as are independent of any discoverable change of texture in any part of the body.

β. *Symptomatic*, or those connected with organic disease.

This second class may, we think, be again sub-divided into—

γ. Cases in which the hæmorrhage arises from some disease in the part from whence it proceeds; and

δ. Cases in which the disease exists in some distant part capable of influencing the circulation in the former.

We ought not to lose sight of the fact that hæmorrhage by exhalation occurs much more frequently from mucous membranes than from any other part of the body, and that hæmorrhage from the brain is distinguished from other internal bleedings in not taking place by exhalation, but from actual rupture of a blood-vessel. Dr. Todd is opposed to this doctrine of hæmorrhage without rupture, even of capillary vessels. He says:—"If the red corpuscles of the blood, which measure from 1-4000th to 1-3000th of an inch in diameter, could pass through lateral pores in those vessels, such pores must be large enough to become visible under the microscope." Speaking on this interesting topic, Dr. Williams remarks†:—"We have seen that in some cases blood-vessels are distinctly ruptured; but, in other instances, blood has been poured out in considerable quantities from various mucous surfaces, and even from the skin, without any discernible breach of vessels, or even of the surface. This statement

(continues Dr. Williams) has been made particularly in regard to epistaxis, hæmatemesis, and some remarkable cases of hæmorrhage from the skin, occurring successively at different parts of the body." And he concludes—"That, considering the size of the red particles of the blood, and the absence of any visible pores in the walls of the blood-vessels, even under the highest magnifying powers, it does not appear possible that the particles can escape from the vessels without rupture either of the particles or of the vessels. At the same time it may be stated that in the frog the red particles do pass through capillaries of calibre smaller than their short diameter."* Dr. Williams thinks also that the appearances of capillary apoplexy (*cerebral hæmorrhage*) and hæmorrhagic inflammations of serous membranes, countenance the opinion that many minute vessels become ruptured at once, probably in connection with an altered condition of the blood; and that such minute ruptures occurring in membranes would not be detected by ordinary methods of examination. All the cases that this distinguished physician has recently noticed have been in patients where the blood has departed from the healthy standard, either of the nature of *uræmia* or *cholæmia*.

Chomel† argues that if there does not exist any rupture of the blood-vessels in these cases of hæmorrhage from the mucous and serous membranes and the skin, there remains open to us, in the present state of medical science, but one mode of explaining the escape of the blood:—"It can only take place through the same channels as pour forth the mucus, the serum, and the sweat;" and that this is promoted by an altered condition of the blood is more than probable. Several instances are recorded by the celebrated Dr. Baillie,‡ of patients under his care, in which large quantities of blood had been lost both from mucous and serous mem-

* In so passing, these red particles appear rolled up, like an ice wafer. The extensible and flexible property of the red corpuscles was long ago pointed out by Mr. Hewson; and the correctness of his observation has been subsequently demonstrated by the researches of Mr. Gulliver, Mr. Wharton Jones, whose practical acquaintance with the microscope is well known, states that "the red corpuscles can readily accommodate themselves to vessels of a diameter less than their own."

† Dictionnaire de Médecine.

‡ Morbid Anatomy.

* Reported in the MEDICAL GAZETTE, vol. x.
† Principles of Medicine, second edit. p. 217.

branes, in which he was unable to find any vessels which appeared to have poured forth blood. A patient suffering from some pulmonary disease, under the care of Dr. Elliotson, was sitting up in bed. Suddenly blood came from his mouth, and he fell back dead. On opening his body the stomach was found filled with blood. There was an enormous coagulum exactly forming a mould of that organ. With the most careful and minute examination, Dr. Elliotson could not discover the orifice of any vessel.*

We cannot, for our own part, refuse to concur in the opinion expressed by Dr. Watson, that in many cases of epistaxis blood escapes from its natural channels without any appreciable lesion, because—1st. There are well authenticated instances of cutaneous hæmorrhage when a dew of blood has appeared upon the skin, which has been wiped away, and has re-appeared again and again, the surface remaining unaltered except in colour. 2d. We have ourselves seen the menstrual discharge flow drop by drop from an inverted but healthy uterus. 3d.† In hæmorrhages from mucous membranes we have frequently first an increased secretion from the part, then the natural secretion (mucus) mixed with blood, and lastly we have blood alone. Here there are proofs of a pouring forth of blood by exhalation. That flow may probably be promoted by an altered condition of the blood itself, as we observe, for example, in cases of typhus; and here changes in the blood, manifest by its fluidity and by petechial appearances, may also be referred, in part at least, to defective elimination of effete matter,—a subject on which the researches of Dr. R. Cormack and others have recently thrown much additional light.

Bichat also states that he has on many occasions scrupulously examined the internal surface of the peritoneum, of the pleura, and of the pericardium, in cases of hæmorrhage from those membranes, and that their surface appeared entirely free from any laceration; so that to him it was very evident "that the exhalents had poured forth the blood, in place of the serum which they had previously secreted." It would appear, then, that the doctrine of hæmorrhage

by exhalation is supported by facts difficult to controvert, and by authorities whose standing in the profession entitle their opinions to the highest possible respect. At the same time, the student must not forget that the contrary is maintained by some physicians of the highest standing.

β. The causes and treatment of epistaxis.

Some of the observations belonging to this division have been anticipated in the narrative of the case of Mr. —, and in what has been said when speaking of the source of the hæmorrhage. These hæmorrhages are frequently constitutional. Mr. — had had bleeding from the nose from a boy, always with advantage. These habitual hæmorrhages very commonly proceed from the rectum. We once attended a nobleman in whom a discharge of blood took place from the rectum almost daily. The same thing had been observed to happen to his father; and these periodic bleedings are some of them clearly hereditary. In the case under our care the bleeding caused no annoyance beyond staining the shirt. In others these habitual hæmorrhages take place once a month; or once in two or three months, from which M. Gall argued the possibility of male menstruation. Now, although these hæmorrhages may be regarded as maladies, they are never to be stopped, unless they go to an extent dangerous to life. In boyhood epistaxis is often idiopathic; depending, in all probability, on active congestion, and is almost always advantageous. In the adult it often is periodical, and its ceasing to be regretted. When it comes on for the first time in a man advanced in life it indicates that the veins of the head are distended, and disease of the heart or the approach of apoplexy are to be suspected and guarded against. In young girls it is sometimes vicarious of suspended menstruation, and in both sexes sometimes either takes the place of piles or is a part of a hæmorrhagic diathesis. It should be borne in mind that the blood-vessels which belong to the pituitary membrane inosculate with the jugular veins and sinuses of the skull. Hence the suppression of epistaxis when it has been habitual for years is always to be regarded with anxiety.

The indications of treatment have already been sketched. Various are the proposed remedies for epistaxis—from

* Lectures on the Practice of Physic, p. 148-9.

† See Watson's Lectures on the Practice of Physic, vol. i. p. 246, for additional information.

the dashing cold water on the head, and the cold stone or key of the nurse-maid to the back of the neck; the sympathetic constriction of the blood-vessels on the surface, thence sometimes induced, is evidently a reflex action. In the case of Mr. —, narrated in this paper, the first attack was cured by bleeding,—the flow from the nose appeared to cease almost as soon as a current of blood was established from the arm: in such cases purgatives also are of great use. When the case has changed, when by repeated bleedings the system is reduced, the hæmorrhage becomes passive, then we must endeavour to save the blood by such remedies as we applied in the case of Mr. —, viz. styptics and derivants. Various preparations of iron will also be advantageous in many of these cases, when the blood is changed from its healthy condition. With regard to mercury; when the epistaxis is frequent, we are inclined to agree with Drs. Latham and Southey, that much advantage arises from its employment, so as gradually to bring the constitution under its influence. We prefer for this purpose the bi-chloride of mercury, which possesses this great advantage, that it can be given in solution, that its effects are slowly developed, and when given in small doses and continued for a sufficient length of time, we believe it has the power of changing the character of morbid actions existing in the system, far better than any other medicine with which we are acquainted; and its combination with steel, bark, sarsaparilla, &c. &c. &c., places in our hands many powerful weapons for combating disease.

It will be observed that the subject of epistaxis has only been treated *medically*; for that part of the subject which belongs to the surgeon, such as the application of plugs, &c. &c., the student must consult some established authority. *Nesutor ultra crepidam*, is an aphorism we physicians should carefully study, for it is only by confining ourselves to our branch of the profession, by acting to others as we should wish others to act to us under similar circumstances, that we can maintain the honour of our calling, and expect the support of our professional brethren; "*licet omnibus, licet etiam mihi, dignitatem artis medicæ tueri.*"

Sheffield, Jan. 1850.

[To be continued.]

ON THE EARLY SECRETION OF MILK IN PREGNANCY.

By J. J. TRAYER, M.B. &c.
Queen's County, Ireland.

ON the 27th December, 1849, M. F., æt 20, sought advice for a catamenial irregularity of four months standing. She is of medium stature, dark hair and eyes, rather dark skin, of perfectly healthy appearance, and is unmarried.

The condition of the nipples, observed while examining the sounds of the heart, strengthened an incipient suspicion that her state of health might depend upon a strictly physiological cause. The nipple was manifestly darker and more developed than natural, and the slight pressure used in examining the mammary gland caused to exude from each breast a few drops of a fluid exactly resembling the milk of a woman who has nursed for a short period. The gland was of moderate size, and the above-mentioned colouring did not extend far round the base of the nipple. The abdomen was now examined with the stethoscope, and on its first application in the right iliac region a very distinct soufflé detected; while a little higher up, and more towards the mesial line, was distinctly audible the double beat of a foetal heart. A vaginal examination discovered a state of parts corresponding to the middle period of pregnancy; i. e. the neck of the uterus still long, the os uteri larger and softer than in the virgin state; the body of the womb high up, and the vagina relaxed and lubricated with abundant mucus. Here, without pretending to be able to decide very exactly the period of pregnancy, yet considering,—1. The state of the cervix and os uteri; 2. The size of the uterine tumor, which had not yet reached the umbilicus; 3. The moderate size of the mammary gland, together with the absence of any very extensive areola round the enlarged nipples, and the want of the mottled appearance (so well described and delineated by Dr. Montgomery) peculiar to the latter weeks of pregnancy; 4. A remarkably recent and circumscribed condition of the "vergetures" of the abdominal skin; to which may be added, 5. That the foetal heart, though so dis-

tinctly audible as to render it quite easily counted, and compared with the mother's pulse, still had quite the sound of a *very small* heart: a sound, sharp, clear, precise, and yet of small volume;—from these, and other minor evidences, I mentally concluded that my patient was almost five months pregnant. And as it was to be feared that she wished to conceal this fact, and obtain medicine capable of provoking abortion, a guarded line of conduct was necessary. I therefore said to her ("*missis ambagibus*"), but of course kindly, "you are between four and five months with child; when did intercourse occur?" After a moment's apparent consternation, she replied, on the 12th of last August. "How do you know the exact day?" "It was Lady-day (a great holiday). It afterwards came out that she had been expecting her catamenia about that time. That a few hours after coitus they appeared, and continued their usual time, till the 15th, and had not since returned. Coitus had occurred previously to this, but not for many months, and subsequently, but not (as far as I could make out) until after a catamenial period had passed without the accustomed discharge. In fact, she "attributes pregnancy (if it exists) to the intercourse of the 12th August, 1849." If this be so, she is now just twenty-one weeks gone (January 8th, 1850). If conception occurred at a later period, still less; though that this cannot be, would seem evident from the fact that the uterine tumor has quite left the pelvis, and that all the symptoms caused by its pressure previous to the sixteenth week of pregnancy (and she describes them accurately), have ceased some *three weeks or a month ago* (Dec. 27, 1849). That she is not more than twenty-one weeks gone seems *likely* from the result of the examination above detailed; *certain*, if her evidence is admitted, and her frankness entitles her to credit. I may then assume that twenty-one weeks complete of pregnancy have elapsed. On the 27th ult. I unfortunately did not examine with the microscope the *breast-fluid* above described. I however had an opportunity of so doing to-day, and being a mere "*débutant*" with the microscope, I at the same time examined a drop of fresh cow's milk, with the following result. The globules floating in this human breast fluid were fewer in number,

of larger size, and less uniform than those of the cow's milk, which were much more *crowded* together, of a more uniform and smaller size; in other respects their similarity was striking. Two-and-a-half hours after it was collected, I examined this milk, (?) and found it *decidedly acid*. This case presents two or three interesting features—1. The period of conception seems exactly determined; 2. Subsequent to impregnation a regular catamenial discharge; 3. Milk seems fully formed at the end of the fifth month. These points, I trust, justify my recording this case.

CASE OF
TRANSPOSITION OF THE THORACIC
AND ABDOMINAL VISCERA.

BY WILLIAM CLAPP,
House-Surgeon to the Devon and Exeter
Hospital.

JOHN ABBOTT, æt 37, the subject of the following case, was a patient in the Devon and Exeter Hospital, under the care of Dr. Miller, with pulmonary and laryngeal phthisis, of five months duration, and of which disease he died, Nov. 28, 1849.

On a post-mortem examination, a curious transposition of the viscera was found. The base of the heart occupied its usual position, but its apex pointed downwards to the right side. The arch of the aorta arose from the right and thicker ventricle, and passing upwards curved round to the right side, continuing its course downwards on the right of the vena cava, through the chest and abdomen, to its division into the iliac arteries. The arteria innominata arose on the left side of the arch, and divided into its two corresponding branches; and on the opposite side arose the right carotid and subclavian. The pulmonary artery commencing on the left and thinner ventricle, in front of the aorta, divided, and transmitted its left branch through the arch. The left lung possessed three lobes; the right two. In the abdomen the large lobe of the liver, with the gall-bladder, occupied the left hypochondrium, and at its transverse fissure the order of its vessels was reversed, the artery being situated on the right, and the duct on the left.

The right hypochondrium was occupied by the splenic extremity of the stomach with the spleen, and the left iliac fossa by the cæcum. The colon ascending on the left side, and arching across the abdomen, descended on the right to its sigmoid flexure in the right iliac fossa. The aorta being situated on the right of the vena cava throughout its whole course, the relative position of its branches with the corresponding veins was similarly reversed. It is to be regretted that a more minute inspection of the body could not be made, and that only the heart and great vessels could be preserved for the purpose of injection.

Dr. Watson, in the *MEDICAL GAZETTE* for 1836, has given a valuable and interesting account of 33 cases of transposed viscera, four of which were detected during life. Of these 33 cases, 19 occurred in men, 6 in women, and in 8 the sex is not specified; and in the same volume is the record of a case by Mr. Snowden, which occurred in a male patient at the Hull General Infirmary. Mr. M'Whinnie, in the *MED. GAZ.* for 1840, has published the details of two cases, both occurring in males, but in one of them the transposition was confined to the viscera of the abdomen; and in the *Lancet* of 1836 will be found an account of a case similar in this particular to the last. Some interest has been connected with the question, whether persons in whom a transposition of the viscera existed, were usually left-handed: in the present instance, as in the greater proportion of those already on record, such was not the case.

Exeter, Jan. 11, 1850.

IS COCCULUS INDICUS A POISON?

IN our last volume we gave a short report of a case in which a man had been tried and convicted of feloniously administering the berries of *Cocculus Indicus* to a child nine weeks old. The berries had passed through the body of the child without doing any injury. It was thereupon contended for the prisoner that, as the poison was in the kernel and not in the husk, the berries could not be regarded as poisonous. The point was reserved, and the case was argued on Saturday last before the judges.

The Court held that where a man administered something that was poison, with intent to murder, but in such a way that it did not act, he was guilty. The conviction was therefore affirmed.

MEDICAL GAZETTE.

FRIDAY, JANUARY 25, 1850.

THERE is no subject on which there is greater difference of opinion among practitioners of all classes, than that of medical legislation. The term "reform" is hacknied: with some it implies the demolition of existing institutions, and the levelling of all to one common rank by some Procrustean process, despite the differences and distinctions which are now admitted by the public. The common ground upon which all can meet appears to us to be very limited; but with a new session of Parliament, and the prospect of some new attempt at medical legislation, it may be well to consider whether there are any, and what points upon which English, Scotch, and Irish practitioners are agreed. We have not found it to be disputed in any quarter that the licensing bodies are at present too numerous, and that there is great inequality in the education and examination of candidates. Diplomas are thus obtained by a species of disgraceful competition, and the profession is filled with men who are unfit to practise, but who, nevertheless, have a legal title to call themselves physicians or surgeons. These evils require removal more urgently than many others which are absurdly paraded as prominent grievances, *e. g.* the denial of corporate rights and privileges. The concession of privileges of this kind would no more remove the evils which oppress the profession, than the concession of universal suffrage has removed the political grievances of a neighbouring country.

Mr. Syme appears to us to take a very reasonable view of the licensing system. This plan of reform includes the suppression of a licensing power in univer-

sities, and the reservation of this to certain mixed examining boards in the three kingdoms. He observes—

“Nothing in the course of discussion for framing medical bills has excited more jealousy, or led to more complicated regulations and restrictions, than the conferring of degrees by universities—which, of all subjects connected with medical education, certainly least required the interference of the legislature. But the licensing boards have always laboured under a painful apprehension of their qualifications being disregarded if the more imposing title of Doctor should be recognised as an equivalent for conferring the right of practice. The medical bills, accordingly, contained the most strict and elaborate precautions for preventing degrees from being obtained on terms so easy as to endanger the demand for licenses of inferior value; and thus, so far from offering any encouragement to University study, would have repressed it by restricting the recognition of students through the honours conferred upon them by their “*Alma Mater*.” Now, all this vexatious and manifestly hurtful legislation might have been avoided by simply declaring that university degrees were to be regarded merely as honorary distinctions, and were not to convey any privilege of practice. I know that the University of Edinburgh would not object to this; and believe that the other universities of Scotland would agree to it. The object of our desire is not to license, but to teach. We care not where the licensing power is placed, provided it be exercised without hardship and injury to our pupils. At present, the pupils who come here from London and other parts of England, and also those of this country who propose to obtain the Apothecaries’ license, are trammelled in their preliminary education by the obligation to serve a five years’ apprenticeship in compliance with the laws of the Apothecaries’ Company, who have also insisted upon what we regard as an erroneous and objectionable arrangement of the course of study. The universities desire nothing but relief from these obstacles to the discharge of their duties, so as to render them most useful to the public.”

He condemns the formation of a new

College; and we confess there appears to us to be insuperable objections to its establishment. The members of the Royal College of Surgeons will not consent to have their College converted into an Institution of General Practitioners, or a modified Apothecaries’ Hall; nor do we believe that any minister can be found who will recommend such a project in a medical bill, even in these days of revolutionary changes.

Mr. Syme is naturally very sanguine about the success of his own plan of medical legislation. It certainly has the merit of simplicity, and is well deserving of the attention of all those who take an interest in such matters.

“It is founded upon the principle that an equal amount of qualification should entitle to an equal right of practice, and upon the assumption that Scotland contains efficient means of medical education. If these data be conceded, I would propose that Government should constitute a Board, which, for the sake of distinction, might be named the Medical Council, and be charged with the following duties:—

“1. To determine what amount of education and examination should be held requisite for obtaining the license of general practice.

“2. To sanction or constitute Boards for bestowing the license of general practice in London and Edinburgh, and also in Dublin, if the measure should be extended to Ireland.

“3. To publish annually a Register of qualified practitioners, together with the degrees, diplomas, or other honorary distinctions which they may have acquired.”

In our last number (page 131) we reprinted the heads of the Bill which Mr. Syme proposes as the basis of medical legislation. Like all measures of this kind, it is of course open to objections. The constitution of the Medical Council is well devised for the three kingdoms, but where are the ministers who could escape from censure in the nomination of the members? The duties assigned to the Council are simple, and clearly

defined: they involve great responsibility, and the results of their deliberations cannot, we think, fail to be satisfactory, provided the Board be fairly constituted of competent men, selected without reference to politics or any undue private influence. There will also, we think, in practice, be some difficulty in constituting the mixed examining Boards; nevertheless, the proposition is the only one open unless the candidate be hereafter transferred as now, from one licensing body to another. The publication of an annual registration list is a very necessary part of any measure, but it involves the troublesome question of precedency. Although no details are given, the details must come before the measure can be laid on the table of the House of Commons, or receive the assent of the legislature. We do not make these remarks in order to discourage the author of this plan of reform, which is made up of the best parts of the old bills, but only to show that the most-simple measure which can be devised must necessarily involve the interests of many licensing bodies, and of a large number of practitioners who derive their right to practice from ancient acts and charters to which they may still cling. Mr. Syme's Bill appears to be confined to the licensing of general practice. The absence of details, which its author considers to be its great recommendation, prevents us from expressing a fair judgment of its probable mode of working: nevertheless, the plan deserves that which it will no doubt receive—a fair and impartial examination, before it is consigned to the fate of the memorable bills brought forward by Sir James Graham.

WE invite the attention of our readers to the report of a trial elsewhere inserted,* in which a dentist brought an

action against a patient, and recovered a verdict, for the cost of two sets of artificial teeth, under somewhat novel circumstances. The case is interesting, because it lays bare the advertising and peripatetic practices of a certain class of London dentists. The plan consists in inserting attractive advertisements in the country newspapers, holding forth promises of renovated articulation and mastication, with a restoration of comfort, and the removal of deformity, &c. A country agent takes a cast, which is then forwarded to the London man of business, who forthwith constructs the set of teeth, without seeing the patient. That the sets should not fit under such circumstances cannot excite surprise; but we may be well astounded that any jury, even a "common jury," should condemn a defendant to pay the whole of the charges for two sets, when it was proved, by respectable "dental" evidence, that the first set was useless, because there were interstices between the framework and gums; and the second set, because the teeth projected so much, and the gums were made so large, that, when fixed in the mouth they produced great distortion of the features. On the other side it was contended that the sets were a good fit. The learned Judge, in summing up the case, very properly condemned the advertising system adopted by the plaintiff, who was proved by one of his own witnesses, a "dental mechanic," to carry on business in this ubiquitous manner, and by the aid of plaster of Paris casts, at Leamington, Exeter, Tenby, Monmouth, Coventry, Stafford, and Warwick. Country patients were led by the advertisements to believe "that they should see, consult with, and be treated by, the dentist himself. This was clearly a deception, because he was represented by another person." Notwithstanding this strong opinion, the jury returned a verdict in the plaintiff's

* See page 165.

favour for the full amount of his demand, although the two sets were "misfits," so that the defendant could not use them, and the dentist had acted by proxy in the matter.

This verdict appears to be so much against evidence that there will no doubt be a motion for a new trial. As it stands, it is a direct encouragement to what all must condemn as a most unfair mode of dealing with the public. The verdict points to a very lucrative mode of practice. A man has only to see patients by proxy, obtain a plaster cast second-hand, construct a set of teeth from the cast; and, should this, as is most probable, turn out to be a bad fit, and not to realize the promises of the advertisement, then he may procure an order for another set, and, if payment be refused, bring an action for the cost of both. The jury, by their verdict in this case, have settled that whether a set fits a patient or not, is quite a minor consideration, and that the teeth must be paid for, even although they prevent instead of aiding articulation and mastication!

The enormous profits made in the dental profession, which at present requires for its exercise no preliminary education, no license or diploma, may be estimated from the statement of one of the plaintiff's witnesses, who is described as "a journeyman dental mechanic." He stated, in cross-examination, that he had sold his business at Leamington for £5000, and had then with his family travelled on the Continent. He had recently recommenced business in London. He thought the plaintiff's charges (25 guineas a set) fair and reasonable. This fact will show that dental practices founded by journeymen mechanics, command a much higher price in the market than those of general practitioners who have spent a fortune on their education.

It is satisfactory to perceive that both in London and the country there is a strong desire to demonstrate the benefits of sanitary reform in a plain and practical manner. In Oxford and other towns it is proposed to publish at intervals classified lists of deaths on the plan so successfully carried out by the Registrar-General. This will have the good effect of keeping public attention fixed on any important fluctuations in the health of towns.

The objects of the Tower Hamlets Association, of which the prospectus is now before us, are of a still more extensive kind. They are—

"1. To demonstrate to Government, through an organised body, the urgent necessity of a large and comprehensive plan of sanitary improvement for the eastern districts of the metropolis, and the injustice of conceding to all England and Wales, and to the city of London, Acts for improving the public health, while the metropolis with its 2,000,000 of inhabitants is excluded from the beneficial operation of such acts.

2. To instruct the people of the Tower Hamlets as to the enormous evils which result from the present defective sewerage and drainage, ventilation, street cleansing, removal of refuse, and supply of water; from the practice of burying in towns, and the prevalence of numerous disgusting and pestilential nuisances.

"3. To demonstrate that efficient and economical remedial measures may be employed, which would burden neither landlord nor tenant, nor diminish but enhance the value of property, and secure through increased health increased means and certainty of the payment of rent.

"4. To obtain increased security to life and property, by the appointment of properly qualified officers of health, whose duty it should be to ascertain and certify the fact of death, and to investigate and lay before competent authorities the circumstances and agents which deteriorate, generally or locally, the health of the community, so that they may be removed."

If a real necessity for sanitary reform has justified the application of public health Acts to England and Wales as well as the City of London, there appears to be no good reason why metropolitan districts like the Tower Hamlets should be excluded. On this point it is justly remarked :—

"It is not in the power, either of the inhabitants of the districts or of the local authorities, to do much to remedy these evils. Conflicting interests and powers, disunion of action and of sentiment, and a want of any general system or plan, have prevented efficient measures of relief being obtained last session. The people are now, therefore, called upon to bestir themselves, so that another session of Parliament may not pass away and still leave them exposed to the present evils, which sicken, impoverish, and destroy them. Evils which render the eastern districts *the most unhealthy* of the metropolis,—evils which kill *one* in every *thirty-eight* annually, in place of *one* in every *fifty*, or 26 persons in place of 20 in every 1000,—evils which last year destroyed the lives of 5,174 individuals, and prostrated on the bed of sickness some 144,000 more, *unnecessarily*,—i. e. over and above the number that death and disease could fairly demand; Whitechapel, being the most unhealthy district, having an annual mortality of 29 persons in place of 20 in every 1000.

"It is notorious that while of 1000 boys at five years of age only 46 die annually in Lewisham, 64 die in Poplar, 73 in Stepney, 80 in Shoreditch, 81 in Bethnal Green, 94 in St. George's in the East, and 101 in Whitechapel. Those, therefore, who reside in these unhealthy districts have only half the probability of rearing their children,—half the chance of their growing up to comfort and support their advanced age,—that the people of Lewisham have.

It has been clearly ascertained that while in Lewisham no more than nine men, at their early prime, aged only 35, in every 100, are stricken down by death, 13 die in Poplar, Stepney, and Bethnal Green, 14 in Shoreditch, and 16 in Whitechapel and St. George's in the East. This is a most important fact, when it is considered how many women and children are dependent on

the labour of those who thus untimely perish."

The Tower Hamlets Sanitary Association further propose to aid the cause of sanitary reform by the publication of tracts on various subjects connected with hygiene and public health. We have in this prospectus a list of 102 subjects which are submitted for consideration. The titles are appropriate, and have an immediate bearing upon the objects of the Association. We shall be glad to hear that the efforts of the committee have been ably seconded by the medical practitioners of the district, and that their example has been followed in other places to which sanitary legislation has not been yet extended.

EXPENSES OF CORONERS' INQUESTS.

At a recent meeting of the Middlesex magistrates, some discussion took place on the great increase of inquests, and the expenses connected therewith. The general opinion among the magistrates was, that sufficient discrimination was not used in selecting cases for inquests, and that a large number were held quite unnecessarily. It was stated that since 1828 the inquests in the county had increased 150 per cent., although the population had increased no more than about 30 per cent.

The following important resolutions were unanimously adopted :—

"Resolved—That notice be given to the coroners that in future the Committee for Accounts and for General Purposes will require to be informed of the grounds upon which each inquest has been taken, in order that they may be satisfied that it has been duly taken; and the coroners be recommended, for the better information of the committee, to keep notes of the evidence upon which they have acted in directing the inquests to be held, as well as of that which was produced before the jury.

"Resolved also, that the coroners be recommended to adopt an uniform system for obtaining from the parish officers, or such other persons as may give the coroner notice of a death, such preliminary information as may satisfy the coroner that the circumstances require an inquest to be held, and that the coroners be requested to send into the committee, with their accounts, the information upon which they have acted."

Reviews.

Obstetrics; the Science and the Art. By CHARLES D. MEIGS, M.D. &c., Professor of Midwifery and the Diseases of Women and Children, in the Jefferson Medical College at Philadelphia, &c. &c. 8vo. pp. 685. Philadelphia: Lea and Blanchard. 1849.

Females and their Diseases; a Series of Letters to his Class. By CHARLES D. MEIGS, M.D. &c. 8vo. pp. 670. Philadelphia: Lea and Blanchard. 1848.

MIDWIFERY, partaking of the recent improvements in medical science, has emerged from the condition of a mere empirical handicraft and has assumed the more dignified character of modern obstetrical science. The obstetrician, to use the words of Dr. Meigs, "is a physician, who, in addition to a general knowledge of physic and surgery, adds the special information that is necessary for one having the peculiar charge of all sexual affections, whether in the department of midwifery or in the other complaints of the sex." In order, then, that the claim of obstetrics to be regarded as a science be maintained, it is obviously required that the practitioner should possess an acquaintance with those several branches of knowledge which alone can teach the *why* as well as the *how* of their proceedings.

From the standard fixed for the obstetrician by Dr. Meigs, whom we shall here regard as the representative of transatlantic obstetrical science, it is clear that its professors in America have no lower aim than cis-atlantic practitioners. Dr. Meigs's reputation has, in Great Britain, long preceded the works now under consideration. We have therefore great satisfaction in bringing under our readers' notice the matured views of the highest American authority in the department to which he has devoted his life and talents.

The two works referred to will be regarded by us as consecutive portions of one subject. They comprise not only "the fruit of many years of painful toil in the acquisition of clinical experience and knowledge," but they contain also the evidences of an extended acquaintance with European medical literature,

both continental and British. This feature, together with the elevation of tone and eloquence in style often exhibited by the author, constitute no slight merit in works on the subjects with which the author is here occupied, and which are generally consigned to bulky treatises of a practical kind, limited by their authors' individual experience. If in some few instances Dr. Meigs's physiological opinions be not quite at the level of the most recent investigations, these blemishes may be attributed to distance, and they at the same time occur so seldom as scarcely to call for notice as faults, and may readily be remedied by the well-instructed reader. To proceed, then, with our analysis of these two works, we observe that Dr. Meigs divides the study of obstetrics under the four following heads:—

1. The anatomy of the parts concerned in reproduction, with remarks on their pathology and therapeutics.
2. The physiology of reproduction.
3. The therapeutics and surgery of midwifery, or the obstetric art.
4. The history and diseases of the neonatus, or young child.
5. To these we add another division (the subject of the second volume at the head of this notice), viz.—The general diseases of females.

The first division; the anatomy of the parts concerned in reproduction, embraces the following topics. 1. The anatomy of the pelvis, describing from an extensive series of observations the various measurements of the several diameters and planes of the pelvis; illustrated by diagrams. When directing attention to the sacral foramina, the author depicts in vivid colours the intense agony which he has in some cases met with from compression of the sacral nerves by the descending child's head.

2. The mechanism of the pelvis, and of labour as it depends upon the relations of the pelvis and fetal head. These we find thus clearly summed up.

1. *Flexion*.—The head becomes flexed, the chin going to the breast. It enters the pelvis obliquely, with the vertex to the left acetabulum.

2. *Rotation* takes place because of the repelling resistance of the plane of the left ischium, the lessened resistance under the arch, and the incurvation of the hollow of the sacrum.

3. *Extension* commences under the upward pressure of the perineum, and

continues to increase until the child is born.

4 *Rectification* allows the vertex to seek its original oblique direction, in which it goes back again towards the left acetabulum. (p. 54.)

The dimensions of the child's head and other presenting parts constitute the subject of the third chapter of this first division. Dr. Meigs considers the ordinary computation of four inches for the long, and three inches and a half for the conjugate diameter of the child's head, as considerably under the truth. By careful measurement of three hundred crania of mature children, the mean of the long diameters was four inches and ten twelfths; of the biparietal, three inches and eleven twelfths. The same chapter includes the different positions in which the foetus may be found at the end of gestation: these are all distributed by the author under the two classes of presentations; cephalic or pelvic. The anatomy of the female organs of generation is contained in the two following chapters.

Second division.—The physiology of reproduction includes menstruation; causes and treatment of amenorrhœa; and pregnancy.

In this section the author relates the history of the ovular doctrine of menstruation, which he cordially advocates, and teaches thus emphatically as the true theory:—

"All that has been said upon the nature and causes of menstruation prior to the year 1825, is nonsense. Our real information began to acquire some philosophical certainty from the moment of the discovery of Purkinje's vesicle, which cast so bright a dawn upon the nature and laws of reproduction; and that, by the labours of physiologists and naturalists since the said date, 1825, our dawn has grown to be a great shining light, under which things are clearly seen, that were formerly wholly unknown, or imperfectly comprehended." (p. 118.)

"When a woman's body, who has perished while menstruating, or soon after the performance of that act, is examined by the anatomist, he *always* finds upon the surface of one of the ovaries, a small bloody spot, &c." (p. 120.)

Again—

"A woman *never* menstruates without rupturing a graafian follicle and discharging an ovulum, and leaving a scar of the opened hila."* (p. 122.)

* Italics our own.

Again—

"Up to the period of puberty, the ovaries do not contain any mature or ripe ovules."

"The ova contained within the graafian follicles are *matured periodically*: in women, once a month."

That at the period of puberty ovula begin to be matured in the ovaria of women, is true; but that these are matured only periodically has not been proved to be true; indeed, the statement is not based on as close an observation of facts as its importance in the theory demands, for it has been proved by the researches of Dr. Ritchie that the ovula may be matured and discharged during the intervals of menstruation, and even at periods when that function is not taking place (*vide* Carpenter's Principles of Human Physiology, 2d edit. p. 687.) Carus, also, an authority whom Dr. Meigs quotes on several occasions, states, that in the ovaria of girls from two to four years of age, he has observed the follicles fully developed, and the ovule floating in the fluid of the graafian vesicle (*System des Physiologie*, von Carl Gustav Carus. Leipzig, 1849, p. 655). It does not accord with the researches of other observers, that, as Dr. Meigs states, the traces of a recently discharged ovule are *always* found in the dead body directly after menstruation. All that known facts warrant, is, the assertion that the two phenomena, menstruation and ovulation, are concurrent, but not necessarily the one dependent on the other. They are both the effects of the attainment of a certain point in female development, and each constitutes an important link in the physiology of reproduction, but an inseparable connection between them has not yet been demonstrated: the law of periodicity in one, does not necessarily infer causation. Menstruation is a periodical function of the uterus. Ovulation is the constant function of the ovaries. The connecting link, if there be such between these two functions, has not yet been discovered. A relationship, but not the close one of parentage, exists between them. Menstruation has a relation to the nutrition of the ovum, ovulation to conception.

We pass on to the next chapter, on *Pregnancy*. In this, the several stages or processes which complete that condition are severally considered at some length by the author. Fecundation of

the ovum after its expulsion from the graafian follicle is but the preliminary stage; pregnancy, the author defines to be the "fixation of the ovum;" this, it is obvious, may occur at any point between the graafian follicle and the cervix uteri. In woman the uterus is the seat of impregnation. But we do not concur with the author in regarding the ovary as the seat of impregnation. In this chapter the history of the ovum and of its abortion are also included.

On a subject of considerable importance in a practical and medico-legal point of view, that of the *duration of pregnancy*, we very willingly receive the opinion of Dr. Meigs in further confirmation of the opinion that a greater latitude is required than has generally been admitted on this point. The author fortifies his statements by reference to the statistical tables of various authorities. To these we may add that of Professor Murphy, in his highly valuable "Report of the Obstetric Practice of University College Hospital;" in which 301 days is regarded as the average limit of gestation,—the most frequent period being found to be 285 days, and one case in which it was 338 days, or more than eleven months. That not unfrequent deviations from the ordinary standard of 280 days occur, must have come within the notice of every obstetrical practitioner; at all events, numerous exceptional cases are met with which admit of no other explanation, unless it be that of flat denial, which is not at all times expedient or justifiable.

We now proceed to the third division of the subject, viz.—the therapeutics and surgery of midwifery, *the obstetric art*.

The first chapter, on the nature of labour, contains, with the second, on the conduct of labour, all the instruction and advice that the student can require under these heads: if any be wanting, experience will soon supply the deficiency, and it must be borne in mind by the student, that experience alone can give the *tactus eruditus* so indispensable to the safe practice of the obstetric art.

The succeeding chapters in this division are distributed under the following topics:—face presentations; presentations of the pelvic extremities of the child; preternatural labours; deformed pelvis; the forceps; embryotomy; induction of premature labour; inversion

of the womb: puerperal fever; on *strepia* vaginas; on ergot; and on milk fever. From these several chapters we shall select a few points in illustration of the practical views of the author.

Face presentations the author is "clearly of opinion may well be included among the natural labours, except where some failure of the powers of the woman should cause us to convert them into preternatural ones, obliging us to turn and deliver by the feet; to restore the vertex by some serious operation; or to extract with the forceps, or other instrument." Of these face presentations the author admits only two positions—"one with the chin to the left, and one with it to the right of the pelvis." This view has the practical advantage of incurring the need of "only one doctrine in their management, namely, to bring the chin to the arch of the pubis, if practicable; if not, to let the forehead come and do our best with it."

In allusion to the cause of presentations of the pelvic extremity of the foetus, the author observes—"The attachment of the navel-string is nearer to the pelvis than to the head of the child; the hand, therefore, hangs downwards; but when the cord, by the growth of the ovum, has become of considerable length, the child ceases to be dependent from it, for the cord is not unfrequently from twenty to thirty inches long." The position of the foetal head Dr. Meigs considers cannot be changed by its own movements after the fifth month, but that it may undoubtedly be reversed by violent movements of the mother at a later period. We may here refer our readers to several papers by Dr. Simpson, on the attitude and positions, natural and preternatural, of the foetus in utero, published in the Edinburgh Monthly Journal of Medical Sciences,—in which the author traces these to certain reflex acts on the part of the foetus, by which it assumes and maintains its position as best adapted to the physical shape of the normal and fully developed cavity of the uterus, these positions "being the aggregate result of the reflex or excitomotor movements on the part of the foetus, by which it keeps its cutaneous surface withdrawn as far as possible from the causes of irritation that may act upon it as an irritant, or that happen to restrain its freedom of position or motion."

Dr. Meigs is opposed, both on theoretical and practical grounds, to Dr. Simpson's line of practice in cases of placenta prævia: he observes—"I cannot but think that in any case in which it is possible to detach the whole placenta, it would be also possible to introduce the whole hand, and thus commence at once the operation of turning, which ought to be deemed as the essential indication of treatment in placenta prævia, and which the earlier it is done so much the greater chance does it give both of rescuing the child and saving the woman from fatal losses of blood." The opinion of Dr. Meigs is in conformity with that of the majority of British practitioners.

It may seem needless to offer any observations with regard to the management of the placenta in ordinary cases; but as we have heard it advised to remove the placenta if it be not expelled within twenty minutes after the birth of the child, we avail ourselves of Dr. Meigs's authority to deprecate such hasty and "meddlesome midwifery."

"Some writers have been disposed to assign a fixed period, up to which the accoucheur ought to wait, before he resorts to compulsory measures for the delivery. But there can be, or ought to be, no fixed rule on the subject, except this one rule, namely, that the placenta must be got away, as there is no security while it is left. I think I have never waited for its expulsion more than an hour and a half, for I have always supposed that if it would not take place in one hour, there was little prospect of its taking place in twenty-four hours."

This recommendation is also in conformity with the practice of the most eminent and scientific accoucheurs in England.

We must confine our notice of the author's observations on the management of the various abnormal presentations, to the simple statement, that in these, the student will find full instruction and judicious advice, and the advanced practitioner valuable counsel.

Dr. Meigs's remarks respecting the use of the *forceps* are deserving of close study, though we think he misunderstands the opinions of British obstetricians relative to their employment, when in pointing out that the *forceps* are employed for the child's safety, he observes—"If the student should take his impres-

sions of duty from studying the English books of midwifery, he will go into the world believing that the obstetric *forceps* is the mother's instrument, and he will use it for her, and for her alone;" for ourselves, we neither were taught, or ever entertained this opinion, nor do we regard it as an expression of English opinion on the matter. We would remind students and junior practitioners of the small occasion for the use of the *forceps* met with by Dr. Clarke, of Dublin, as opposed to the increased frequency with which they are now employed by some.

The author's remarks on *ergot* are particularly worthy of observation, from the exposition of its mode of action with which they are accompanied, though we are far from concurring in the following observation:—"Upon the whole I must say that I feel far more comfortable, and free from apprehensions for the child and the mother, when I deliver with the *forceps* than in waiting the result of a dose of *secale cornutum*." The danger of its premature employment is familiar or obvious to any one acquainted with the mechanism of parturition; and, at the same time, it has occurred that, although given with great apparent judgment, its exhibition has occasionally led to that irregular contraction of the uterus after the birth of the child which has been the cause of post partum hæmorrhage, and again called for its free exhibition in order to arrest the latter.

The fourth division, embracing the history and diseases of the *neonatus*, is necessarily brief, as they would, if fully treated, suffice to form no inconsiderable portion of a separate treatise on the diseases of children. It comprises the subjects of viability, tying the navel string, dressing, food, the meconium, alvine dejections, red gums, sore mouth, jaundice, coryza, and cyanosis neonatorum.

In entering upon what we have set apart as the fifth division, in the consideration of the topics embraced within the science of obstetrics, we open another volume by Dr. Meigs, but not another and independent work, since, according to his definition of an obstetrician, which we have already quoted, the province of the latter includes the diseases peculiar to females, whether in the pregnant or unimpregnated states. We shall, therefore, now place before our readers the topics contained in the second volume at the head of this notice, omitting those

which have already been considered, or may be found, in the former.

The amount of knowledge demanded is doubtless considerable, and the degree of delicacy and honour called for, is readily estimated by every rightly constituted and well-regulated mind. We do not think that the author adds to the dignity of these subjects by the style in which he enforces them. The familiarity of the lecture-room is scarcely sufficient excuse for committing to press the following remarks:—"A man may be wise without being learned; but it is not uncommon to be learned, and yet to be a perfect *ass* in all that relates to what I might term administration or action. Let your light, therefore, shine among men, and do not conceal it under a bushel of *gaucheness*." There is a flippancy, if not irreverence, in this collocation of phrases which we should hardly have expected to meet with from the same pen as the following words—"There is, probably, no art so great to form the manners, as that which teaches us to keep the temper and desires of the soul within the just bounds within which it is contained among all true followers of Christ."

Under the consideration of sex, the author treats, in several letters, of the peculiar moral and physical characteristics of woman, in a strain of eloquence not usual in, if not entirely foreign to, the gravity of the topic he seeks to adorn. In the style and composition of this portion of the author's writings there is something of a national feature partaking of inflation.

The first eleven letters are occupied with the anatomy and injuries of the external organs. The next eight include displacement of the womb. In prolapsus, besides the use of the globe pessary, which Dr. Meigs regards as indispensable, he advises the employment of the "sachet or little bag;" thus, "When your patient shall have discarded her pessarium, let her construct half a dozen small cylindrical bags as big as the thumb: they should be made of good linen, and should be packed full, very full, of finely-grained, not pulverized, Aleppo galls, to which may be added a few grains of sulphate of quinia and alum. The bag may have a short bit of tape or a little loop of tape secured to its lower end. If soaked for an hour or more in some common rough claret or weak port, then pressed and dried in a napkin, and dipped in sweet oil, it can

readily be introduced into the vagina as a medicated elyptroid pessary. It does not inconveniently distend the vaginal walls, which it tends to strengthen, enhancing their tonicity by the medicinal articles contained, while it elongates or produces the vagina, and thus supports the womb *in situ*." "These medicated sachets are of very great value in the treatment, not only of relaxation and fall of the vagina, but also as agents for suppressing the too abundant excretions of the follicles and glandules of the mucous membrane."

Retroversion, or the turning over backward, of the uterus, the author states to be "one of the most common of the deviations of the organ met with in practice," and gives a diagram showing, in a vertical section of the pelvis, the fundus uteri resting low down between the vagina and the rectum. We doubt the alleged frequency of this and of some other malpositions of the pelvic organs, but no one can deny the possibility or the fact of their occasional occurrence.

The subjects met with in the succeeding, and not treated of in the preceding volume, are—polypus of the uterus; fibrous tumors; cancer; phymetria, the existence of which the author denies, otherwise than as an obstetric accident; hydrometra; hydatids; ovarian disease, and ovariotomy; Fallopian disease; puberty; menstruation, to which we have already directed attention; menorrhagia; dysmenorrhœa; and hysteria. In these various topics we do not find much that possesses the claims of novelty or originality: we shall therefore bring our remarks to a close, as we have already exceeded the limits that can conveniently be spared to our notice of these works; and, in conclusion, while commending them to our readers as containing much that is highly valuable, and as conveying the results of the long experience of a very talented and well-accomplished obstetrician, we cannot but wish that he had presented the results of his observation and study in a more condensed form. The matter of real practical utility is so encumbered with repetitions, fine writing, and verbiage, that, in their present form, we very much fear that the generality of English medical readers will have neither the time nor the inclination to sift the wheat from the chaff.

The Philosophy which shows the Physiology of Mesmerism, and explains the Phenomenon of Clairvoyance. By T. H. PASLEY. 8vo. pp. 104. London: Longman and Co.

THE author, we fear, will charge upon us the most extreme obtuseness, when we declare our inability to comprehend his "trite sketch of the philosophy of nature, which dedicates itself to the most noble champions of mesmerism, Dr. Elliotson and Dr. Ashburner of London, and Dr. Eedalle of Calcutta, in compliment and grateful acknowledgment for having rescued from the fangs of ignorance, envy, and self-conceit, the science of health and knowledge,—the science of mesmerism, which unfolds the hitherto unknown wonders of the animal system, and will unfold the wonders of the entire universe, when the telescope and microscope are familiarly used by the clairvoyant."

Mr. Pasley's philosophy seems to us, for the most part, the philosophy of negation. All ancient and modern philosophers are denounced by the author. Aristotle, Bacon, Newton, Black, Reid, Davy, Des Cartes,—all, we are informed by Mr. Pasley, "experimented on false principles."

"The philosophy of the nineteenth century is founded on the crude ideas of the imperfectly learned in the earlier days of science, ever since adopted, and never investigated, instead of being deduced solely from the INERT NATURE OF MATTER, the only true basis." (p. 3).

Speaking of attraction as expounded in the Principia of Sir Isaac Newton, the author takes occasion to remark:—

"A more absurd article of belief has no place in the Athanasian code of mind-perverting dogmas, yet admitted as true by the most eminently talented and highly learned of the present day." (p. 4).

We here perceive that the author's crusade is not preached *solely* against "established philosophy." Again—

"The foregoing plain facts, although demonstrations to the contrary are on record in the royalised TRANSACTIONS, but with reference to the inability of inert matter to attract, are certain proof that attraction is founded on a guess-work basis" (p. 12).

We think the above extracts will serve as an ample apology to our readers for our abstaining from further quotations.

The only refuge left for philosophy and philosophers, is, according to Mr. Pasley, to shelter themselves under his doctrine of *medium of space, universal pressure, and minus-pressure matter*. Herein, whatever the terms may mean, may be found the clearest, readiest, and most infallible explanation of all the mysteries of creation. Hence shines forth the bright and full blaze of sunshine which dispels the mist of ignorance spread over knowledge by Bacon, Newton, Black, Davy, Des Cartes, and others. The only difficulty which we encounter in the application of this philosophy is to comprehend anything of the author's meaning.

Under these circumstances our readers will not wonder that we are as far as ever from detecting the *explanation* of clairvoyance, even in the following lucid statement. :—

"When to the clairvoyant degree the nerves have been denuded of impeding electric matter, the nervous fluid is enabled to act on the brain as if unmuffled; and as its continuity from the orifices of the retina through space is not in any manner altered, so, to the altered electric condition, mesmerically effected, on the contents of the nerves between their orifices and the brain, we must attribute all mesmerically produced phenomena; and without supposing that the brain is quickened to a higher degree of sensibility, or that any one of its various organs has acquired some exalted degree of psychologic activity." (p. 82).

Our obtuseness is doubtless to be regretted, if it be true that, by the aid of clairvoyance, "other worlds and their inhabitants may become clairvoyantly familiar to human observation," "the geography of the globe be improved," "the northern passage discovered," and "hidden shoals" and concealed rocks discovered to the mariner. Other readers may perhaps be more successful than ourselves in their study of this book.

USE OF SULPHATE OF IRON IN DYSMENORRHEA.

DR. N. WARD, of Burlington, Vermont, reports that in several cases of painful menstruation, he has obtained the best results from the use of $\frac{1}{4}$ gr. of sulph. ferri, with a slightly laxative dose of sulph. magnesia, every day during the interval of the monthly periods, or for the last ten days of the interval.—*American Journal of the Medical Sciences.*

Proceedings of Societies.

LIVERPOOL MEDICAL AND PATHOLOGICAL SOCIETY.

December 18th, 1849.

Chronic Hydrocephalus—Tapping, and Death.

MR. J. H. TAYLOR exhibited a child to the Society, aged 8 years; healthy except in its head, which was of great size, and hydrocephalic: at the back part was a tumor larger than an orange, containing fluid, apparently communicating with the interior of the skull through the posterior fontanelle, which was not perfectly closed, though all the other sutures were fully ossified. Mr. Taylor stated that it was his intention to puncture the sac, and employ subsequent pressure.

(Mr. Taylor, at a subsequent meeting, furnished the Society with the result of the operation. On tapping the tumor, about a quart of fluid escaped, and the child began to sink in a few hours; and, though stimulants and other appropriate treatment were adopted, it died in thirty-six hours. He illustrated this sudden sinking by the case of a man in Winchester, who had retention of urine for twenty-four hours, the whole of which was withdrawn at one time by a catheter. He began to sink soon after, and died in a few hours. On a post-mortem examination, no injury to any part could be discovered. The effect of the sudden withdrawal of the fluid in ascites is familiar to the profession.)

Dr. NEVINS mentioned three cases of

Spina Bifida,

in illustration of the effects of tapping.

A gentleman in Dublin, aged 40 years, had the sac punctured when a child, but he did not remember how often. When Dr. Nevins saw the case, the sac had for many years been contracted, and formed nothing but a fold of skin. The canal of the spine was not perfectly closed by bone, but there was no protrusion of the membranes. He enjoyed full health.

Two children at Guy's had been treated in the same way under the care of Dr. W. J. Liif. One of them, when three weeks old, was tapped, which was repeated eight or nine times, when it died. The other, when four weeks old, was tapped, and the operation was repeated eight or nine times in it. At the end of three or four months it was seen, and continued quite well; with the sac contracted.

Dr. DICKENSON had had a child tapped three times for chronic hydrocephalus, but

no permanent benefit resulted, and it died at last of pneumonia.

Mr. ELLISON saw the child now before the Society at the time of its birth, when there was no appearance of the disease, which appeared when it was a few months old. It was then tapped three times without any bad symptoms, but the fluid always re-collected, though pressure was steadily employed.

Mr. BAXTER could not see what benefit was likely to result from tapping. He had often seen it employed in cases of spina bifida without advantage.

Mr. ELLIS JONES related the case of an infant whose spina bifida he had tapped. Inflammation and mortification ensued, and the child died.

Hysterical Paralysis treated by Electricity.

By Mr. BALMAN.

The subject of the present case is a young lady, *et.* 16, whose mother died of phthisis *et.* 36; the father I have occasionally attended for a nervous affection. She appears to have enjoyed good health up to about ten years of age, when she was observed to stoop a little, from weakness of the back; at eleven, experienced frequent pains in the chest, between the shoulders, and particularly under the left breast; at twelve, one shoulder was noticed to project more than the other; at thirteen years of age went to Ireland to visit some friends, where she was recommended to consult a medical man, who pronounced the spine to be curved, and advised her going to Dublin to consult Mr. E., which she did on the 18th of October, 1846, who recommended her coming into his Orthopaedic Institution here. She was ordered to sleep on a peculiar kind of couch, to have the back rubbed every morning with a hair glove, and exercise two hours a day in a gymnasium: after exercising in the gymnasium, a nurse was directed to lace her stays, which were made with steels in Mr. E.'s own peculiar way: she was also directed to lie on a reclined board three or four hours each day. After remaining under this treatment about six months, her general health was somewhat improved, and the pains of the chest and between the shoulders almost removed. About this time she began to feel a constant pain in the back, corresponding, as we shall afterwards see, with an angular curvature of the two last dorsal vertebrae. The pain in this region was never relieved by lying down, as in other parts of the spine; on the contrary, rather increased. Soon after this she was sent to a boarding-school in Cheshire, where she got worse, and, by the advice of a medical man, was again recommended gymnastic exercises, and attention to her general health.

In March, 1848, did not feel so well, from cramps all over, and loss of sleep: had suffered from cramps occasionally since twelve years of age. She now left school and returned home, feeling very unwell, great exhaustion and faintness coming on very frequently after walking out only a very short distance. At Christmas, 1848, had very troublesome boils on the chest, back, and other parts of the body: this weakened her very much, and produced so much pain and uneasiness, with cramps at night, that she was obliged to stand on a cold hearth-stone for a considerable time as a means of relief. In June, 1849, Mr. E. again saw her, and recommended change of air and sea-bathing. Bathed a few times in salt water without any benefit; felt getting weaker, until one evening late in the month of June she was suddenly taken faint with cramps all over: remained in this state four hours. Next day felt very weak and faint; in the evening took some *sal volatile*, and soon after had the first confirmed fit of hysteria, which she believes was owing to the *sal volatile*.

I was now requested to see her, and on entering her room I found her sitting on a sofa, looking pale, but otherwise presenting no striking indication of ill health: her attendant said she had been unable to stand, walk, or speak, since the fit of the previous day. On examination, I found the spine very crooked, with an angular curvature of the two last dorsal vertebrae: on passing my fingers down the median line there appeared to be distinct tenderness both between the scapulae and over and around the seat of the projecting spine, extending down to the sacrum; the feet were cold, livid, and completely insensible to the prick of a needle, as far as the knees; the hands were in a similar condition, but the loss of sensation did not extend beyond the wrists. Although unable to stand or support the body for a moment without assistance, I soon afterwards learnt she was enabled to turn the feet about in almost any direction when lying down in bed: her nights were restless, and without sleep, and the eyes presented that peculiar glistening aspect so characteristic of hysteria. She complained of headache, and cramps over the whole body: these were rendered very distressing by cold and pressure of every kind; even a very powerful liniment served but to renew the cramps and destroy all sense of feeling on being applied to any part of the body. I very soon had an opportunity of seeing her in one of the paroxysms, which now generally occurred about once in every twenty-four hours: these, as in similar cases of this mysterious disease, were truly frightful to witness: the legs extended, and rigid as

marble, hands clenched and immovable, the head and neck thrown back, whilst the whole body appeared to be convulsed and writhing under the most violent tetanic spasms. Sometimes the symptoms for a time assumed a different character, and she would lie motionless in one position for hours together, in a state more resembling catalepsy than anything else.

The catamenia did not appear more than once from May 1847 to May 1848; from this date she continued to menstruate regularly every three weeks, always more profusely than usual. *Leucorrhoea*, which so frequently precedes and accompanies these cases, set in about Christmas 1848, and continued gradually to increase up to the time of the first paroxysm of hysteria: this appeared a no very unimportant symptom, as tending to throw some light as to the exciting cause of the disease: it is at all events evident that the severity of this complication corresponded very closely with the gradual deterioration in her health about this time: and on inquiring more particularly into this matter, I find that she suffered so much inconvenience from this cause as to oblige her for some time before the attack to discontinue her usual morning exercise; and latterly even a few turns in the garden caused so much exhaustion that she very frequently fainted after coming in.

I commenced the treatment with the usual routine of antispasmodic and tonic medicines, such as *Ammonia*, *Iron*, *festid Gums*, &c., without much apparent benefit: opium was administered at night to soothe the irritability of the nervous system and induce sleep, but without success; three grains of solid opium given at bed-time served only to make her still more restless, without any narcotic effect being produced whatever.

Sept. 6th.—After one month's trial of these and a variety of other remedies, finding matters but little improved, the pain in the lower part of the back being constant, and the severity of which I was inclined to think contributed in a great measure to renew the fits, whilst the paralysis, if it may be so called, remained stationary, I began to think that there must be some irritation of the spinal cord or its membranes. I now, therefore, applied seven or eight cupping-glasses along the whole of the spine every alternate day; prescribed small doses of the *Hyd. c. Oreta* and *Carb. of Soda* every night, and a turpentine enema every third morning: on one occasion I ventured to apply the scarificator, and took away about three ounces of blood, with evident relief. Under this mode of treatment she began steadily to improve: headache much relieved, and the pain and tenderness of the back not so

urgent; she also soon passed better nights, sleeping three or four hours together soundly: the attacks returned on two or three occasions afterwards, always just before the approach of the cataplexia. The lower extremities, however, continued useless, and without any return of sensibility, and she had as usual to be carried by her attendant from room to room. I now commenced to apply galvanism, with a view of restoring the use of her limbs: at first the shock of a very powerful battery was not felt on placing one pole to the sacrum and the opposite one to any part of the leg below the knee, but after a few trials I found one isolated spot, about the circumference of a shilling, over the outer part of the tibia, a few inches below the knee, sensitive to its effects. Continuing its use every day the feeling seemed to radiate day by day downwards, over the whole of the external part of the leg to the ankle; the inner part of the leg remaining as before completely unaffected by the electric current: the sensibility, however, soon returned here likewise, and extended gradually to the extremity of the second toe: immediately after the next *séance* I learnt with satisfaction that soon after my leaving the room my patient got up very coolly and walked across the room, and indeed over the whole house, unattended or supported by any one. This happened on the 12th of October, since which she has continued to take regular walks out of doors for considerable distances, and is rapidly improving in all other respects.

REMARKS.—My first impression on seeing this case was that it was nothing more than hysteria, and the loss of power over the lower limbs was simply one of those protean forms which this disease sometimes assumes. This opinion was in some measure strengthened by the fact that she had, a little time prior to my being requested to see her, suddenly lost all power of her limbs, and as suddenly regained their use. That the paralysis was not due to caries of the vertebrae, or any serious organic lesion of the cord, appeared to me evident, from the entire absence of any constitutional symptoms to indicate such a state of things: for the body was plump and well nourished; the limbs, although useless, were firm and resisting; and she was enabled, as I have said, to turn them about almost in any direction when lying down. Moreover, there was a perverted or morbid state of sensibility of the cutaneous surface of the entire body (which, I should suppose, would not be the result of any local injury of the cord); so much so, that pressure and friction of any kind appeared to extinguish at once all sense of feeling.

Even a strong liniment had precisely the same effect.

Not succeeding, however, with the usual routine of remedies in producing much improvement in my patient's health, but in some respects losing ground, the numbness and loss of sensibility of the limbs increasing, whilst the pain in the back was in no way diminished, I was led to believe that there must be some functional derangement of the spinal cord or its appendages, arising from some cause or other, and that the symptoms resembled, in many material points, the somewhat obscure, but not less interesting class of cases described by the Messrs. Griffin, Teale, Burns, and others, under the head of Spinal Irritation. My conclusions were drawn, as they sometimes must be in studying the diversified and often complex phenomena exhibited in this particular class of diseases, from watching the effects of the remedial means and appliances employed. Our treatment of many of these cases must, therefore, to some extent, be empirical, until morbid anatomy is found to reconcile more closely the relation of many of the anomalous symptoms presented in this disease with some precise pathological lesion after death.

As regards the actual seat of the disease, it in all probability was connected with some congested state of the spinal veins; and, indeed, it does not seem very difficult to imagine why this state of things should occur if we carefully examine the anatomical arrangement and structure of the venous system of the spinal cord. Thus, according to Breschet, there is everything here calculated to favour stagnation of blood. 1. The veins are deprived of valves, thinner, and much more delicate than in any other part of the body. 2. They are relatively very numerous, subdivided, and tortuous; so that each spinal nerve may be said to be literally encircled and bathed in venous blood, as they penetrate in the intervertebral foramina. The consequence of this arrangement, notwithstanding the frequent communications by which this impediment is in some degree obviated, must be that the blood will move more slowly and with greater difficulty. That congestion does sometimes happen from this peculiar disposition of the veins of the spinal axis, must, therefore, be extremely probable. Ollivier mentions that he had often found in his dissections fibrinous clots blocking up and distending the veins of the spinal cord, and even those which accompany its nerves; and many other instances are related by Morgagni.

The influence of galvanism in restoring the power of locomotion was certainly more remarkable than anything I have

before witnessed. That this was in reality the result of the galvanic stimulus, and not, as we know is sometimes the case, by some sudden moral impression unloosing the magic web, which seems to hold captive the power of volition,—I think there cannot be the least doubt. The effect of this agent was perceptible at each application; and it was not until the remedy had been persevered with for some time that the beneficial results were manifested so strikingly.

To show how powerful is the operation of electricity in stimulating directly the voluntary muscles, I may add that she felt, as she often expressed, a strong inclination to walk after each séance; so much so, that she many times made the attempt, but always without success, falling thump upon the floor, until the period mentioned; and even then, when she had regained the power of standing in the erect attitude, it required much determination to keep it; and but for the exercise of a series of Terpeiahorian movements, she feels convinced that she would not have been able to have retained her position.

I may mention that I made trial of this remedy at a much earlier period in this case without observing any benefit; on the contrary, many of the symptoms appeared to be aggravated after its use. It was, therefore, at a particular stage of the disease, when counter-irritant and alterative medicines had removed the more active symptoms of the complaint, that galvanism appeared to do good. This remedy, therefore, like any other, is applicable only under certain conditions; and the success of it will depend not only upon the tact and acumen of the practitioner in the selection of his cases, but also the particular phase of the disease at which its use is apparently indicated.

In answer to an inquiry, Mr. Balman said that it was the *secondary* current of electricity which had been employed throughout; an important fact in its bearing upon the statements lately put forth upon the value of the primary current only, and the inutility of the secondary.

WESTMINSTER MEDICAL SOCIETY.

Saturday, January 12, 1880.

MR. HIRD, PRESIDENT.

Length of the Umbilical Cord.

DR. TYLER SMITH exhibited a funis, which, from the attachment to the umbilicus to its insertion into the placenta, was fifty-nine inches and a half in length. The average length of the cord is about eighteen inches;

the largest of which he could find an account was in a case of Baudeloque, where the cord measured fifty-seven inches. In Dr. Smith's case, the cord presented, with the head. Such an extraordinary length illustrated one of the causes of funis presentations, and also the power of the fetal circulation. In this case, including the placenta, the length of the blood-channels beyond the umbilicus was upwards of ten feet, and still longer, considering the spiral arrangement of the umbilical arteries.

Conversion of Tubercle into Earthy Matter.

MR. HAYNES WALTON presented a well-marked example of this condition. The specimen was taken from the lung of a patient who had been under Dr. Taylor, of Guildford Street. She was forty years of age, and had been subject to palpitation for six or seven years. Dr. Taylor had attended her frequently, during the last six or seven months, for chronic bronchitis. She had improved under mercurials and counter-irritation over the larynx, but would not persevere with the mercury. Mr. Walton had been called in, to apply nitrate of silver to the larynx. She died suddenly. There must have been a very large tubercle originally, for there is a large cartilaginous cicatrix, and much puckering of the surrounding substance of the lung. The earthy deposit is somewhat bigger than a pea, and of stony hardness; and the walls of the cavity are lined with a smooth membrane. Except some lobular emphysema, the rest of the lung was healthy. The right lung had milary and crude tubercles in each of its lobes. There was considerable disease of the heart. The consolidated aortic valves were exhibited. The oedematous larynx was not produced.

Hysterical Ptosis.

This case came under the care of Mr. Canton, at the Royal Westminster Ophthalmic Hospital. Emily T—, aged seventeen years; had menstruated at the age of thirteen years; the flow continued profuse for a week, when it suddenly ceased, in consequence of her being much frightened, and had not reappeared until three weeks ago. She remained very sickly for a year after menstruating, when her eyes became inflamed, in consequence of some matter getting to them from the face of a child she was nursing. For this complaint she was under treatment two months; and since that time has complained of dimness of vision in both eyes. She suffers pain occasionally in the head, but not of a severe kind. Light is stated to increase the impairment of sight; and when attempting to read for any time, "the letters run into one another;" or if working, she "misses

seeing her needle" after a while. The pupils are dilated, but the irides are active in their movements. The patient is very hysterical, and suffers from gleeus, palpitation, waywardness of appetite, constipation, &c. The treatment adopted by Dr. Canton had been with a view to the establishment of the menstrual flow, by the exhibition of aloetic, steel, lytta, and similar remedies, without, however, any resulting benefit. In October last, the patient found, suddenly, that she was unable to open the right eye, except by raising the upper lid with her finger, which, being removed, the lid again fell, and remained drooping. Pricking pain was now complained of in the eye, and in the corresponding temple, and there was still further diminution of vision. The iris, nevertheless, moved with its former activity, and the ptosis was unaccompanied by external strabismus, or a pupil larger than the one of the opposite eye; the fellow-organ continued, in all respects, the same as previously. Symptoms of an hysterical character being again present in a marked degree, the same plan of treatment was again resorted to by Mr. Canton as that which he had previously employed, and which for two months had been suspended. Mercury, strychnine, blisters, and such remedies as are ordinarily employed in ordinary ptosis, were avoided, from the peculiarities presented by the case, which Mr. Canton considered might be fairly regarded as one arising from uterine derangement. The sequel had proved this view to be correct; for, at the expiration of a month (during which time the remedies were persevered in) the ptosis disappeared as suddenly as it had occurred; and in a fortnight afterwards, the menses appeared, and continued to flow for ten days. Since this time, vision of both eyes is improving.

Stricture—Extravasation of Urine.

Mr. HANCOCK was called, during last July, to a gentleman suffering from extravasation of urine. He had suffered from stricture for nineteen years, and had had the stricture divided through the perineum, and also the bladder punctured through the rectum, but without relief; as, in the first instance, the wound in perineo was allowed to heal up without attention being paid to the urethra. Mr. Hancock treated the extravasation in the usual way; and in the course of a few days, with the patient's consent, again divided the stricture through the perineum. He kept the wound open by passing a No. 10 gum catheter into the bladder by that passage until a No. 11 silver catheter could be readily passed along the urethra into the bladder, when he allowed the perineal wound to close, and the patient is now recovered. He considers the case

of interest, as bearing upon the questions, raised during last session, with reference to the treatment of abscess of the perineum connected with obstinate stricture of the urethra, and also with reference to the operation for opening the urethra from the perineum, and its after treatment, especially in relation to the employment of the catheter; that when the abscess is unconnected with opening into the urethra it is better to abstain from the employment of the catheter, notwithstanding the patient may experience difficulty in urinating, but that where such complication exists, which he believes is most frequently the case, the employment of the catheter should be carefully attended to, particularly when it has been found necessary to open the urethra through the perineum, in which case the instrument ought never to be entirely discontinued. To this cause he attributed the failure of the first operation in the case just related, as well as in others to which he alluded; the catheter had been neglected, the parts allowed to heal and contract, and thus the patient became as bad as ever. In conclusion, he offered some remarks on the usual perineal operation for opening the urethra. He considered that the difficulties of its performance were greatly enhanced by the situation at which the urethra was usually opened, the opening being made towards the anterior part of the membranous portion of the urethra, which is sometimes completely cut across, so that when the catheter is introduced and passed along the anterior part of the urethra, it comes out through the wound, but the posterior part having nothing to support it, the sides of the canal fall together, close up, and great difficulty is experienced in hitting it with the point of the catheter: this difficulty may be obviated by making the opening in the urethra further back, close to the front of the prostate gland. In performing the operation, the surgeon will be greatly assisted by recollecting that the urethra, passing through Cowper's ligament, corresponds exactly to the points in the raphe of the perineum, midway between the posterior root of the scrotum and the anterior margin of the anus; that a knife plunged straight in at this point will reach the membranous portion. After describing the various steps of the operation, he concluded his paper by observing that the catheter employed should be sufficiently large to fill the canal of the urethra, otherwise the portion of the urethra behind the stricture when divided will fall together, and the point of the instrument catch, and thus be prevented entering the bladder.

ACADEMY OF MEDICINE, PARIS.

Jan. 8, 1850.

M. BRICHETEAU, PRESIDENT.

On Enlargement of the Spleen.

AFTER the reading of several letters, M. PIORRY rose to answer some observations contained in the report, read at the last meeting of the Academy, on a work by M. Durand, on Lesions of the Spleen in relation to Intermittent Fever.

M. Piorry observed, that the objections taken by M. Bousquet to the measurements of the spleen as derived by M. Durand from the employment of the plessimeter, were deduced from microscopic examination, and not from investigations of the size of the organ during life. The argument of M. Bousquet, that M. Lachaise had not found enlargement of the spleen by any means an invariable accompaniment of intermittent fever, M. Piorry disposed of by stating that he had had many patients under his charge who had previously been treated by M. Lachaise, and who stated that they had not been percussed to ascertain the size of their spleen; and that in all these cases this organ was enlarged.

M. Piorry also observed, that the theory of the erectile structure of the spleen was not sufficient to explain the facts brought forward by M. Durand. He further denied that the spleen becomes enlarged during digestion, or under the condition of sanguineous plethora.

M. Piorry stated, as confirming his own and M. Durand's views, that he had met with many cases in which traumatic lesions of the spleen had induced enlargement of that organ, and had been followed by intermittent fever.

M. BOUILLAUD expressed regret that M. Piorry had not adduced a series of comparative observations relative to the size of the spleen in the living and in the dead body. M. Bouillaud could not concur in M. Piorry's interpretation of the results of his cases of traumatic lesions of the spleen. M. Bouillaud also objected to the nomenclature of M. Piorry, especially to the term *spleno-macrosie*, as inappropriate, and involving erroneous doctrines.

M. PIORRY defended this term, as expressing the distended condition of the spleen, without defining other pathological conditions to which were assigned other terms, e. g. *splenalgie*, *splenhemie*, *spleno-hypertrophie*, &c.

M. ROCHOUX observed, that the erectile tissue of the spleen, and its occasional temporary distension, had been established beyond dispute. It had also been proved

by experiment that the removal of the spleen was compatible with health. M. Rochoux considered that the part assigned to the spleen by M. Durand was disproved, from the fact that intermittent fever had been frequently seen without enlargement of the spleen; and the reverse, that enlargement of the spleen had been seen without intermittent fever.

M. PIORRY, without reviving the entire discussion, wished to make one observation in reply to M. Rochoux. He did not believe, from his experiments, that the spleen under any circumstances performed the office of an erectile tissue. M. Rochoux had overlooked the fact that when a tissue becomes erect there invariably results a change in its functions. (Laughter.) With reference to certain cases of enlarged spleen referred to by M. Rochoux, M. Piorry regarded the organ as degenerate, not simply hypertrophied.

Here the discussion terminated.

M. BOUILLAUD then read a Report, in the name of his co-reporters, MM. Rayer and Soubeiran, on an essay by MM. Homolle and Quevenne, relative to Digitalis, and the various principles which may be extracted from that plant. The Report spoke in the highest terms of this essay, and recommended its publication in the Transactions of the Academy; which recommendation was adopted.

M. GOBLEY read a treatise on the chemical composition of the eggs of the carp, and their analogy with the yolk of the fowl's egg.

The Academy adjourned.

X

ACADEMY OF SCIENCES, PARIS.

Jan. 7, 1850.

PRESIDENT, M. DUPERRY.

On Chloroform—New Mode of Percussion.

M. DUPERRY was elected President, and M. RAYER Vice-president, for the year 1850.

M. E. A. ANCELON, Physician to the Hospital at Dieuze, transmitted a note on the most frequent causes of, and the less known accidents produced by, the inhalation of chloroform. The author drew the following conclusions:—

1. That in order to obtain promptly and safely the required amount of insensibility, it is requisite that the chloroform should be administered on an empty stomach, and with certain precautions.

2. That when administered, except the stomach be empty, chloroform produces agitation and anxiety, and cannot be given in sufficiently large quantity without danger to life.

3. That death occurs during its anæsthetic effect if the stomach be oppressed by a weight of food or distended with gases, owing to the mechanical impediment offered to the venous circulation of the nervous centres.

M. POISSON, *interne* at the Salpêtrière, introduced a novel mode of percussion, which consisted in the employment of a common-sewing thimble placed on the fore or middle finger, so as to include a small quantity of air between the end of the finger and the bottom of the thimble. This instrument communicates a clearness and intensity to the sounds which enables the physician to detect variations not indicated by the finger alone. X

SURGICAL SOCIETY OF PARIS.

Jan. 2, 1850.

PRESIDENT, M. DEGUIRE.

Operation for Exostosis—Foreign Body in the Oesophagus.

M. MICHON detailed the particulars of an operation which he had performed for the removal of an exostosis of the superior maxilla, in a case which he had already brought under the notice of the Society.

The operation was difficult, and occupied sixty-five minutes. The tumor when removed weighed seven ounces, and was of an osseous structure, of ivory-like hardness, and of an irregularly rounded shape. The removal of this tumor was attended with great pain. The hemorrhage was considerable, but the wound healed rapidly.

M. GIRAUDS related a case of hemorrhage caused by detention of a blighted ovum in the cervix uteri.

M. H. LARREY gave the details of a case in which a piece of bone was lodged for four days in the oesophagus, and the removal of which by instruments was found impossible, but which was carried into the stomach by the act of swallowing liquids. On the sixth day it was evacuated from the rectum without any bad consequences. X

ROYAL INSTITUTION.

January 18, 1850.

On certain recent Discoveries in Science.

THE opening lecture for the season was delivered by Mr. Grove, who undertook (at a very short notice) to supply Dr. Buckland's place. He brought under the notice of his audience a brief sketch of the following researches:—

1. Those of M. Regnault on *Respiration*.

M. Regnault has contrived an apparatus (a diagram of which the lecturer exhibited), by which the exact quantity of oxygen required for the process is supplied and ascertained, and the whole of the carbonic acid expired is also exactly measured and completely removed, so as to prevent a second respiration of the oxygen or of the carbonic acid of the air breathed. By the same contrivances an equality of temperature and of pressure is insured.

The lecturer also exhibited a new eudiometer. A few of M. Regnault's results were stated by Mr. Grove. Warm-blooded animals are found to exhale nitrogen. Animals fed on farinaceous diet exhale a greater proportion of oxygen than those fed on animal food, under which diet a considerable quantity of oxygen is absorbed into the system. Animals absorb oxygen in relation to their size, small animals absorbing more in proportion than large animals. Cold-blooded animals absorb but little oxygen. Hybernating animals in the dormant state absorb both nitrogen and oxygen, and fatten on respiration; but they absorb oxygen rapidly in proportion as they arrive at a state of activity. Insects absorb a large quantity of oxygen.

All these facts M. Regnault explained by pointing out that in proportion to the extent of surface exposed so is the rapidity of cooling, and the consequent need of oxygen for the purpose of maintaining animal heat by the combustion of the carbon of the animal system or of the food.

The effects of the respiration of other gases was also referred to by Mr. Grove, who showed, by an experiment on two sparrows, that animals may live in an atmosphere of oxygen and hydrogen, generated by the electrical decomposition of water, but that more oxygen is absorbed under these conditions, owing to the more rapid cooling of their bodies in this medium.

It was also stated that even carbonic acid gas, in a certain proportion, may be respired with impunity, provided it be mixed with a sufficient supply of oxygen for the combustion of the carbon of the blood.

2. The researches of Matteucci on *animal electricity* were next alluded to, in reference to the relation which that philosopher has found to exist between the direction of the magnetic current and the two classes of nervous functions. When the positive current is directed centripetally, i. e. from the surface towards the nervous centre, muscular contraction takes place; but, on reversing the direction of the current, and passing the magnetic fluid centrifugally through the substance of a muscle, no contraction, but severe pain is induced.

3. A brief reference was then made to the researches of M. Pasteur, on the relation between the chemical constitution of the solutions of certain crystals, and their influence in the production of circularly polarised light. X

Medical Trials and Inquests.

MEDICAL AGREEMENTS.—BREACH OF COVENANT REGARDING PRACTICE.

WILSON v. ASHLEY.

[The following case was tried in the Court of Exchequer on the 16th inst. :—]

This was an action by which the plaintiff sought to recover compensation in damages for the breach of the covenant in a deed of agreement, whereby the defendant had undertaken to discontinue his practice as a surgeon and apothecary within seven miles of a place called Hightown, near Bradford, in Yorkshire. The defendant paid the sum of £50 into Court, and said that beyond that amount he was not liable, seeing it was sufficient to cover any damage which the plaintiff might have sustained.

It appeared that the defendant had been in practice as an apothecary and surgeon at Hightown for between thirty and forty years, and that in the latter part of 1847, his health being in a declining state, he had put an advertisement into the *Leeds Mercury* of the 18th of December of that year, of which the following is a copy :—

"Medical Assistant Wanted.—A qualified medical gentleman, who has had some experience in midwifery, will find a good opening, as the principal is desirous of retiring. A very moderate consideration will be required. Inquire of the printer, &c."

The plaintiff having perused the advertisement, conceived that the "opening" was precisely that into which he should wish to leap, and commenced a communication and negotiation with the defendant, which resulted in an agreement being drawn up, by which, whilst the plaintiff undertook to pay the sum of £400, by way of premium for the business, namely, £50 down, and the remaining £350 by instalments, to be payable at periods which were set forth in the deed, the defendant bound himself not only to introduce the plaintiff to all his professional connexions and customers, and to render him every assistance in his power for the space of the 12 months then succeeding, but he entered into a further covenant to withdraw from the business at the expiration of the said 12 months, and

not to practise during that time, or afterwards, at any place within seven miles of Hightown. The complaints of the plaintiff in the present instance were—first, that the defendant had failed to introduce him to all his customers, amongst whom were many of the most wealthy inhabitants of the district; secondly, that he had not rendered him the professional aid and assistance, as promised; and thirdly, that the defendant had practised then and subsequently for his own individual benefit and advantage. For these laches and violations, but the more especially for the "practising," the plaintiff now demanded reparation in the form of damages. Evidence was called which went to prove that the defendant had introduced the plaintiff to but very few of his customers until a notice had been served upon him on behalf of the plaintiff, calling upon him to perform that covenant of the deed of agreement; and, also, as it had been ascertained that he had been writing prescriptions which had been made up by a chemist and druggist in the town instead of their having been sent to the plaintiff for that purpose, demanding that he should furnish him with a list of the patients to whom such prescriptions had been given. The required introductions, however, it would appear, were then only partially given, for it was proved that the defendant had retained several of the best of his customers, for whom he not merely prescribed, but attended in the usual way. One of the witnesses stated that, in a conversation he had held with the defendant, that gentleman had said that at the time he had entered into the agreement to sell his practice to the plaintiff his health was so bad that he had intended to retire from the business altogether, and to devote himself in future to the chemistry branch of the science, but that, as his health had so greatly improved, he meant to continue his former practice. The witness, upon hearing this, intimated it as his opinion that he had no right to do so, seeing that the agreement into which he had entered with the plaintiff rendered such a course impossible. The defendant, however, reiterated his intention to proceed, whilst his wife remarked that they had a large family, and, therefore, that her husband would be justified, as his health was restored, in resuming his professional avocations, and furthermore added, that no doubt the plaintiff would not pay the money he had undertaken to give. Another witness said, that he had an interview with the defendant, who inquired of him whether he thought the plaintiff intended to proceed against him, when he replied that the plaintiff would commence an action unless he, the defendant, performed the conditions of the agreement. Upon this

intimation the defendant asked the witness if he thought that the plaintiff would pay the instalments; to which he had answered, by informing him that the requisite sum had already been paid into the bank at Bradford to meet the claim, and that he might rely upon the instalments being duly paid. To this witness the defendant reiterated the observations he had made to the one already alluded to, as to his intention to continue his practice. It was also put in evidence that the defendant, in reply to an application made to him for the names of the patients for whom he had prescribed, had furnished the following paper:—

"TO MR. JAMES W. WILSON, SURGEON,
"HIGHTOWN.

"A list of persons who have attended upon you with orders for medicine, and who have not found you at home, and who may have gone to have them made up at other places after having been ordered to attend upon you, &c.

"JOHN ASHLEY, Surgeon, Hightown.
"1848.

"Sept. Mr. Thomas Bentley's s. d.
daughter, Rawford, dry-
salter, &c.,—three visits
and 8 oz. of mixtures
(infus. rose), say . . . 8 6

" William Balmforth's daugh-
ter, Cleckheaton Currill,
—three visits and three
mixtures (6 oz.), made at
the druggist's, as you could
not be found, say . . . 9 6

"Dec. Mr. Robert Steward, gen-
tleman, Cleckheaton,—
six visits, at 2s. 6d., no
medicine (varicose veins) 15 0

"Head's, and Mr. Broadbent's, have all
been made by you, and are no doubt duly
entered.

"A midwifery case.—John Goodall's
wife, Littletown, was ordered to pay you.

"Robert Gomersall, of Littletown, up to
December 31, 1848,—six visits. The me-
dicines you refused to make. (You owe
me, for bars, 6s.)"

On behalf of the defendant it was con-
tended, that that gentleman had done all
he had undertaken to do in the way of
"inducting," as it were, the plaintiff into
his connexion, and that the sum he had
paid into court, £50, was an abundant re-
paration for any loss the plaintiff might
have sustained.

The son of the defendant having been
called to prove that his father had intro-
duced the plaintiff to the various patients,

Mr. Sergeant WILKINS replied in a very
powerful and argumentative speech, re-
marking that he was willing to admit that

there had been an introduction of a sort, no
doubt; but he contended that the ceremony
had been such as to enable the defendant
to retain the whole of his most valuable
patients to himself.

Mr. Baron ROFFE left it to the jury to
say whether the violation of the covenants
of this agreement had been made by the
defendant. Had he renewed his practice
after the expiration of the 12 months sti-
pulated, or had he practised for his own in-
dividual advantage during that period,
when, by the terms of the agreement, he
ought not to have done so? It was quite
clear that the defendant had bound him-
self down not to practise, at any future
time, within seven miles of the scene of his
former business. They must say whether
they considered that the £50 which had
been paid into court was a sufficient com-
pensation for such breach of the agreement
as they might think had been committed.

The Jury consulted for a few minutes,
and then gave a verdict for the plaintiff—
Damages £300.

THE DENTAL TRADE. ACTION FOR THE RE- COVERY OF CHARGES FOR TWO SETS OF ARTIFICIAL TEETH.

Court of Exchequer, Jan. 19th.

MOSELEY v. HOUGHTON.

THIS was an action to recover the charge
for two sets of artificial teeth which had
been supplied by the plaintiff to the defen-
dant.

It appeared that the plaintiff is a dentist,
carrying on business at 30, Berners Street,
Oxford Street, and that he also professes
by his advertisements to practise at Lea-
mington, and about half a dozen other
places in the country. The defendant is a
widow lady residing at Leamington, and
having been attracted by the flaming pro-
mises of dental skill which the plaintiff had
put forth in his advertisements as being
possessed by him, she was induced to pay
a visit to his establishment in that town.
After having repeated her visits two or
three times, she at length arranged to have
a "set" of teeth made by him, and accord-
ingly, having seated herself, submitted to
the unpleasant though necessary ordeal of
having a model of her mouth taken in wax.
In due time the set was completed, and
they were fixed in her mouth by the person
having the management of the establish-
ment, but not by the plaintiff himself.
When the defendant returned home she
discovered that her expectations had been
totally annihilated, for instead of being
able to masticate or articulate, as the plain-
tiff's advertisements had led her to anti-
cipate, she found that as soon as she com-
menced to speak she commenced a whistle.

and that to such an extent as to render her utterance quite indistinct, and scarcely intelligible. And then, as to eating with comfort, that was quite out of the question, for she had no power of mastication. Of course she went again to the plaintiff's establishment, when, upon an examination of her mouth, it was found that the framework not fitting close up to the gums left certain interstices, and hence the "whistling accompaniment" to her speech. Accordingly a second set was to be made with a view to the correction of the faults which were manifest in the first. At length the second set came, but when they were put into her mouth they were found, when the defendant returned home, to be quite as useless as their predecessors, though not in all the same respects, but so far as mastication and articulation were concerned they were an equal failure; in addition to which, the gums and teeth were made so large and, as it was said, so badly, that they protruded the cheeks and lips so much as to produce, in the words of one of the witnesses for the defendant, a "hideous distortion" of her features. The price charged was 25 guineas for each "set," but some deductions or some payments had been made so as to reduce the present claim to £41. 10s., which sum the defendant refusing to pay the plaintiff had found it necessary to bring his action for its recovery.

Several witnesses were then called in support of the plaintiff's case, from which it appeared that the plaintiff was represented at Leamington by another gentleman, who, having taken a model in wax of the mouths of any patients who might be attracted by the plaintiff's advertisements, then made a plaster of Paris cast, which was forwarded to the plaintiff for the purpose of the "set" of teeth being "got up." A journeyman dental mechanic stated that this was the common course of proceeding with respect to orders received in the country, and that he had "got up" many "sets" for the plaintiff, who professed to practise, not only at Leamington, but at Exeter, Tenby, Monmouth, Coventry, Stafford, and Warwick. Another witness, who is now in practice in Claremont Place, Pentonville, and who spoke to the correctness of these "sets," stated that he had formerly practised as a dentist in Leamington; and in reply to a question in cross-examination, said, that "he rather thought he had had a pretty good business while he was there, seeing that he had sold it for £5,000." He then, with that money, had taken his family to Mannheim for the purpose of having his children educated. After an absence of six years he had returned to England, and now had resumed his professional avocation about six months. With refer-

ence to the plaintiff's charge for these "sets," it was perfectly fair and reasonable. Another witness stated that the plaintiff sometimes applied the "atmospheric" principle, by which the teeth were fixed into the mouth without either ligatures or springs. That, however, was a principle that could not always be adopted with success.

Mr. HUMFREY, on behalf of the defendant, contended that she could not be held liable to pay for that which had proved to be altogether useless to her, and which, by the way, had failed entirely to realise the object which the plaintiff had professed to accomplish, namely, to supply such a "set" of teeth as should restore not only the personal appearance, but the powers of articulation and mastication. That being so, it would be a gross injustice that she should be made to pay this demand.

Several witnesses were called, some of whom proved the utter uselessness of both "sets," whilst another said that they would necessarily be so, from the fact of their having been constructed upon a bad principle.

Mr. ROGERS, the eminent dentist, in Cork Street, Burlington Gardens, said, that the first "set" was useless because, when they were fixed in the mouth they left interstices between the frame-work and the gums, whereby it was impossible almost to speak without the effort being accompanied by a "whistling." Then as to the second "set," they projected so much, and the gums were made so large, that when fixed in the defendant's mouth they produced a "hideous distortion" of the features.

Mr. HOCKLEY, another dentist, also described the "sets" as being useless for any of the purposes desired by the defendant. Their mechanical arrangement was bad in principle, in his opinion.

Mr. HAWKINS having replied,

Mr. Baron ROLFE summed up. He said that the jury had heard the evidence, and they must decide in accordance with the opinion which the several statements of the witnesses might have produced in their minds. In his own view of the case, there was matter for great suspicion arising upon the advertisements which the plaintiff had caused to be inserted in the newspapers. By the terms of those advertisements the residents in the different places in the country where he had an establishment were taught to expect, if they favoured him with their business, that they should see, consult with, and be treated by the plaintiff himself. Now, that clearly was a deception, because he was represented by another person. The evidence which had been produced by the plaintiff himself, on the present occasion had gone to prove that fact; for the present defendant had been attended

by another person, by whom the model had been taken and forwarded to the plaintiff for the manufacture of the "set" in London. However, the jury must arrive at their verdict by wading their way through the contradictory evidence which had been given. The witnesses on the one side said that the "sets" were a good fit, whilst those on the other side with equal confidence declared not only that they were not so, but, moreover, that they were perfectly useless to the defendant.

The jury consulted, and then gave a verdict for the plaintiff; damages £41. 10s.

Correspondence.

TINCTURE OF CAPSICUM AS A REMEDY FOR CHILBLAINS AND TOOTHACHE.

SIR.—At this season few diseases are so general as chilblains, and the plans that are generally employed for their removal are seldom attended with more than very slight advantage to the sufferers.

It is a disease that attacks most generally females and delicate children, and those of a languid circulation. The very numerous and various medicines which have been from time to time employed, prove very clearly that no very effective or successful plan of treatment has hitherto been found. Such is the present state of treatment both of chilblains and toothache.

My plan of treatment is simply to saturate a piece of sponge or flannel with the concentrated tincture of capsicum, and to rub well over the seat of the chilblains, until such time as a strong tingling and electrical (?) feeling is produced.

This medicine possesses an extraordinary power in removing congestion by its action upon the nerves and circulation.

This application ought to be continued daily until the disease is removed: relief will be experienced on the very first application, and frequently there will be a total removal of the disease after the second or third. This of course depends upon the severity of the case. This embrocation when rubbed never produces excoriation, if the skin is not broken.

The manner of using it for toothache is by putting a drop or two of the tincture on cotton, and applying it to the part affected, the relief will be immediate. The following is the formula:—*Tinctura capsici concentrata. R Capsici Baccarum, ʒiv. ; Spiritus Vini Rect. ʒxij. Macera per dies septem et cola.*

(It may also be made with advantage by displacement).—I remain, sir,

Your obedient servant,

A. TURNBULL, M.D.

Manchester Square, Jan. 1850.

Medical Intelligence.

COVENANTS IN MEDICAL AGREEMENTS— CASE OF ATKINS v. KINNEAR.

IN reference to this case, a report of which was inserted in our last number (page 129), an attempt was made, on the 17th inst., by defendant's counsel, to reduce the damages from £1,000 to 1s. It was argued that the sum of £1,000 was a penalty, although described in the deed as "liquidated damages," and therefore that the Court of Exchequer had the power of reducing the amount; 2dly, that the distance between the two houses should not be computed by the *shortest* course; and 3d, that the covenant was illegal, as its restrictions were contrary to public policy. We subjoin the judgment of the Court of Exchequer, as it conveys a very serious caution to medical men who have sold, or are about to sell, practices. It will show them that the covenants in agreements must be observed with the greatest strictness.

The Court was unanimously of opinion that the defendant was not entitled to a rule on either of the grounds stated. The stipulation agreed upon between the parties was a reasonable one, and express. It was not opposed to public policy as a restraint of trade, and the Court would therefore give effect to the plainly expressed intention of the parties, so as to protect the plaintiff. The ruling of the learned Baron as to the means of measuring the distance was the correct one. As to the motion to arrest the judgment, that depended on the question whether it was an illegal and improper covenant by which the defendant bound himself not to reside within two miles and a half of his former residence. Such a stipulation was a very fair and reasonable one, seeing that the defendant had sold the goodwill of his practice as a surgeon-accoucheur to the plaintiff for £400, a sale which might be worthless if the defendant was to be allowed to live next door, or within so reasonable a distance, there being leave reserved to him to practise within it as a physician-accoucheur. The next question was, whether the verdict could be, or ought to be, reduced to 1s., as the £1,000 ought to be treated as a penalty (which would be disproportionate to the breach and damages, and would not be upheld as such by the law), or as liquidated damages. Now, the parties had in express words agreed to call this sum liquidated damages, and it was clear that the damages to arise from the breach of all these stipulations being uncertain, and not such as could be ascertained beforehand by exact calculation, it was im-

possible to say that the parties might not ascertain those damages beforehand for themselves as damages, and not by way of penalty for the breach. The case was distinguishable on this point from "*Kemble v. Farren*," and on this ground also there could be no rule.

The result was, therefore, that the rule was refused generally, and the defendant will have to pay costs and damages.

HUNTERIAN ORATION.

THE Hunterian Oration will be delivered in the Theatre of the Royal College of Surgeons, by Mr. F. C. Skey, one of the surgeons of St. Bartholomew's Hospital.

MORTALITY IN LIVERPOOL DURING THE YEAR 1849.

Dr. DUNCAN, the medical officer of health, on Thursday submitted to the Health Committee returns from which we extract the following particulars:—The deaths registered in the borough during the 52 weeks ending the 29th of December were 17,046, being 4,500 more than during the previous year, and 3,900 more than the average of the previous five years. Excluding the year 1847, when the Irish fever was epidemic, the deaths last year show an excess of 6,200 above the five years' average; but as compared with the year 1847, they show a decrease of 3,800, the deaths in that year having been not less than 20,850. Of the total number of deaths, 8,400 were males and 8,646 females. The deaths from three zymotic diseases were 8,546, or one half of the entire mortality. Of this number 5,245 were from cholera, 1,271 from diarrhoea and dysentery, 567 from typhus, 419 from measles, 376 from hooping-cough, 317 from scarlet fever, 113 from croup, 68 from small-pox, 42 from syphilis. The deaths from cholera show an extraordinary proportion of females, for while in the deaths from all causes, exclusive of cholera, there is an excess of more than 5 per cent. of males, the deaths of females from cholera have been 23 per cent. more numerous than those of the female sex. This may, perhaps, in part be owing to the greater exposure of females to the causes of disease, in consequence of their occupation confining them more within or in the immediate neighbourhood of their ill-conditioned dwellings. The sudden and violent deaths (on which inquests were held) were 460, of which 316 were males and 144 females. They include—from drowning, 64; burns and scalds, 54; over-lain, 30; accidentally killed, 144; accidentally poisoned, 4; wilful murder, 11; manslaughter, 7; excessive drinking, 10; want of food, 5; natural disease, 104; suicides, 27, of which there were by hanging, 9; cutting throat, 8; poison, 3; shooting, 2; jumping from window, 1; *felo de se*, 3.

THE PROPOSED NEW CHARTER OF THE ROYAL COLLEGE OF SURGEONS. MEMORIAL OF THE COUNCIL OF THE GLOUCESTERSHIRE MEDICAL AND SURGICAL ASSOCIATION.

To the Right Hon. Sir George Grey, Bart., Her Majesty's principal Secretary of State for the Home Department.

SIR,—We have the honour to inform you that a meeting of the above association was held at Cheltenham, on Thursday, the 10th instant, at which it was unanimously resolved to address you on the subject of the grant of a new charter, for which we understand that the Council of the Royal College of Surgeons of England are about to petition.

We beg to call your attention to the facts, that the charter of 1848 was granted without any previous communication of its provisions to the great body of the members of the College, and that extreme dissatisfaction and general discontent followed the publication of the objectionable provisions of that charter.

To prevent a recurrence of such evils, to promote a greater degree of harmony amongst the members of the College, and to facilitate the adjustment of the difficult question of medical reform, we earnestly beg to impress upon you the expediency of directing that publicity shall be given to the outlines of the intended charter prior to its grant, in order that it may be fully considered and discussed by the fellows and members of the College, whose feelings and interests must be deeply concerned in the proposed measure.—We have the honour to subscribe ourselves, sir, with much respect,

Your very obedient servants,
H. WYLDBORE RUMSEY, F.R.C.S.,
President.
JOHN W. WILSON, F.R.C.S.E.,
Hon. Sec.

The Right Honourable Sir George Grey, Bart., &c. &c. &c.
Gloucester, Jan. 12, 1850.

Reply of Sir George Grey.

Whitehall, 15 January, 1850.

SIR,—I am directed by Secretary Sir George Grey to acknowledge the receipt of the Memorial of the Council of the Gloucestershire Medical and Surgical Association, dated the 12th instant, and to acquaint you, for their information, that no application for a new charter has been received from the Royal College of Surgeons. If such an application should be received hereafter, the request of the memorialists will be borne in mind.—I am, sir,

Your obedient servant,
(Signed) H. WADDINGTON.

To H. Wyldbore Rumsey, Esq.
&c. &c.

FOR THE HALIFAX DISTRICT.
A Summary of Orders, Visits, and Medicines, supplied to Poor-Law Patients, in the Halifax District, for the Year 1849.
 HALIFAX DISTRICT Population, 19,881. Area, 990 Acres.

1849.	Numbers of Orders for Medicines dispensed, from the Relieving Officer.	Visits to the Residences of Patients.	Mixtures dispensed.	Pills.	Powders.	Lotions.	Liniments.	Boxes of Ointment.	Plasters.	Remuneration for the duty, and the supplies here recorded.
First Quarter	225	510	1052	3606	578	46	32	47	132	£20, or 1s. 9d. per case.
Second Quarter	176	460	996	3384	481	55	51	41	126	£20, or 2s. 8d. per case.
Third Quarter*	159	309	1032	3076	467	46	30	85	65	£20, or 2s. 8d. per case.
Fourth Quarter	146	284	783	2309	308	32	31	37	92	£20, or 2s. 8d. per case.
Totals for the Year	706	1563	3863	12385	1826	179	144	160	415	£80, or 2s. 8d. per case.

* This quarter includes the medicines dispensed during the prevalence of diarrhoea. No orders for these cases were issued by the Relieving Officer. The house of the Medical Officer was accessible at all hours to any poor person who might require aid.

Number of Deaths during the Year.

Males	29
Females	43
	—
	72

Of this number, 29 were children under 5 years of age.

Extra Cases during the Year.

Midwifery cases	40
Fracture of the arm	3
Fracture of the leg	1
Vaccinations	62

Observations.—At the close of another year of constant labour and extreme anxiety, such as none but those who have performed similar duties can rightly estimate, I think it will not be useless to comment very briefly on the statistical report furnished above. That it affords a true and faithful representation of my engagements in Poor Law practice for the past year, I pledge my word—inasmuch as all visits have been made by myself, all medicines have been dispensed and regularly entered by my own hand without exception, so that I am enabled to speak firmly and confidently to the most scrupulous accuracy of the above summary. At the same time, it will not be irrelevant, nay, I consider it a duty, to offer such remarks and suggestions as experience in the administration of medical relief may have enforced.

In the first place, then, I may just observe that the medical officer who has discharged the duties, and dispensed the amount of medicines recorded above, in the treatment of every form of sickness, and of every degree of severity, occurring amongst the poorest of the poor, must have had his attention closely occupied, and must have been an eye-witness of a large amount of destitution. From morning till night, and often all night long, the medical officer pursues his dangerous task: from one chamber of sickness and misery he passes on to another: he visits cellars, garrets, and hovels unfit for human beings—filthy, dark, damp, and pestilential, no matter at what personal risk, and in these wretched places he must exercise the skill and appliances of his art in the subjugation of the most formidable disease. Everything is against him, yet, under all circumstances, he must persevere. His mission is to preserve human life, and mitigate, as far as possible, human suffering. He is the poor sick man's last friend, his forlorn hope—he stands between him and death,—it is his province by skill and kindness to endeavour to arrest the fatal blow. Such a man ought not to be pinched, cramped, and thwarted in the way he is—every facility should be afforded him, and every appliance placed within his reach. If such a man do

not understand and thoroughly know the requirements of medical relief, then, I would humbly ask, who does? If those who have the direction and management of these matters had a more practical knowledge of the sufferings and hardships of the sick poor,—if they could see how they have to struggle in order to eke out an existence at all,—if they could transfer themselves by some mighty effort from their own comfortable hearths to the poor sick man's miserable abode,—they would often be more considerate than they are, and would be ready to acknowledge the manifold difficulties with which a medical officer has daily to contend. Unfortunately they will neither investigate themselves, nor will they give credit to those who do.

Orders for medical relief.—With regard to the number of orders given in the preceding table, each representing a case of sickness, there can be no dispute, for the whole are now in my possession. If justice were done to the medical officer, every order should bear a fixed value, and should be in force for a certain period, when, if necessary, it should be renewed. All orders should be obtained from the relieving officer, and brought to the house of the medical officer before 10 o'clock in the morning, and it is only in cases of sudden emergency where this rule need be departed from. The reason for this is obvious. The medical officer would then receive the orders for fresh cases before he left his house, and would be able to make any necessary call in his daily round, and the poor would be taught what they much lack, especially with regard to sickness, viz. consideration and foresight. Such a course would be productive of less trouble to all parties. As things are at present, orders are obtained at all hours, and a large number at night. Disappointment and vexation on all sides are the natural consequence.

Midwifery cases.—These, in many instances, are deplorable cases. Since I became a medical officer under the Poor Law in May 1847, I have personally attended seventy-six cases; forty, as the table above shows, during the past year, of which fifteen occurred in the night. On several occasions it has been my lot to sit on the floor for hours, there being no bedstead in the room, and the patient consequently being necessitated to lie on the floor. This has occurred four times in Chapel Fold (twice in the same room), once in Isle of Man Yard, once in Cross Field, once in a caravan in Cadney's Croft, and once I had a case in the open street. A medical officer must not shrink—he must mould his mind to his circumstances, and make the safety of his patient the grand

object. He has often to perform what no man else can, and what no man else would.

Cholera.—The visitation of the late epidemic was a trying and anxious period. In this district three medical officers and a physician were appointed as a medical staff to undertake the treatment of cases of cholera and premonitory diarrhoea. For seven weeks the duty was incessant both by day and night, and the necessary supplies were large. To the promptitude with which cases were met, the comparative immunity of this town from fatal results may fairly be attributed. I believe every gentleman engaged performed his arduous task faithfully and energetically. Extra remuneration for this duty was promptly awarded.

Deaths.—Among the deaths it will be noticed that a large proportion consisted of children under five years of age. This seems to be the case in all manufacturing districts. Bad nursing, neglect, want of a mother's care, and recourse to that poisonous compound, "Godfrey's Cordial, or Infants' Quietness" (a soothing name for so destructive an agent), must be allowed to be the principal causes. This medicine should be interdicted by law, and the sale of all poisons should be rigidly controlled.

Remuneration.—With regard to the remuneration for the duty and the supplies recorded in the above table, it is unnecessary to say one word. It must be permitted to speak for itself. Doubtless it will be extremely gratifying to the Board of Guardians to ascertain that so much can be done for so little money. It is generally believed that medicines cost nothing, but I could easily prove this idea to be a very great fallacy. Let this matter, however, be as it may, "Life, Health, and Disease," are things of paramount importance. To preserve the first, to secure the second, and administer efficiently to the third, demand not only deep knowledge and acute observation, but the use of many adjuncts which science has gradually developed.

In conclusion, I trust the foregoing report will prove no disgrace to me as a medical officer under the Poor Law. I am neither afraid nor ashamed of the truth, and by it I will stand or fall.

FREDERICK SMITH GARLICK,
Surgeon, Medical Officer for the
Halifax District.

5, Chesapeake, Halifax,
Dec. 1849.

INCREASE OF DEATHS IN THE METROPOLIS
FROM EPIDEMIC DISEASE DURING THE
LAST THREE YEARS.

	1846.	1847.	1848.
Total Deaths in the Metropolis	49,089	60,442	57,628
Deaths from Epi- demic Diseases	9,596	14,039	18,118

THE MANCHESTER MEDICAL REFORM COMMITTEE ON THE PROPOSED NEW CHARTER OF THE ROYAL COLLEGE OF SURGEONS.

[Copy of a letter addressed to the President of the College.]

To the President of the Royal College of Surgeons of England.

SIR,—In accordance with a resolution passed by the Medical Reform Committee, I beg respectfully to convey, through you, to the Council of the College the high satisfaction they feel at the announcement of an intention on the part of its Council to apply to the Crown for an amended charter.

In reflecting upon the probable details of such charter, it has appeared to the Manchester Committee, after much and anxious deliberation, that a measure which shall embrace the following provisions would be generally acceptable to the profession:—

1. That upon the grant of a new charter all existing members of the College who have attained, or who may hereafter attain, a standing of fifteen years, shall, upon the recommendation of six Fellows, be elected to the Fellowship without the payment of any fee, provided that the candidate do not openly trade in medicines.

2. That Fellows of the College practising midwifery shall be eligible to the Council, but that Fellows engaged in the practice of pharmacy shall be thereby disqualified.

3. That Fellows residing in the provinces shall be eligible to the Council, but that two-thirds at the least of that body shall be resident in London.

4. That in the election of the Council the Fellows shall have the privilege of voting by proxy.

5. That after this grant of the new charter the admission to the Fellowship shall be by examination only, and every candidate shall have previously been admitted a member of the College.

6. That the Council of the College shall be empowered by charter, to appoint examiners in all departments of medical and surgical science, and that the board so constituted shall be formed independently of, or conjointly with, the examiners of the Royal College of Physicians, or the University of London.—I have the honour to be,

Your obedient servant,

WATSON W. BEEVER, Chairman.

LICENTIATES OF THE ROYAL COLLEGE OF PHYSICIANS.

At the last quarterly meeting of the Board of Censors, the following gentlemen were admitted Licentiates of the Royal College of Physicians:—Babington, C. M., M.A., Chester Street, Belgrave Square; Brinton, William, M.D. London, Bloomsbury Street; Dr. Frere, Queen Street, Mayfair; Dr.

S. J. Goodfellow, Bloomsbury Square; and Dr. A. P. Stewart, Grosvenor Street. Dr. J. Goodman, of Manchester, was elected an Extra-Licentiate.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise on Thursday, January 17th, 1850:—Andrew Hamilton, Scarborough—John Hollingworth, Staveley, Derbyshire—Leonard William Sedgwick, Boroughbridge—Thomas Warburton Benfield, Leicester.

OBITUARY.

M. PRUS.

WE have to record the death of M. C. R. Prus, Member of the National Academy of Medicine, of the Society of Medicine, of the Legion of Honour, and Sanitary Physician in Egypt. He died from phthisis, at the age of 57, and his body was interred on the 14th inst. M. Dubois delivered a discourse over his grave, setting forth the claims which the deceased had on the respect of the profession. M. Prus had, during the last few years, acquired great celebrity by his researches on the Egyptian Plague and on Quarantine. His report on this subject is the most elaborate which has hitherto appeared.

M. WALTHER.

M. Walther, Professor in the University of Munich, died in that city on the 29th December, after a short illness. Professor Walther had deservedly acquired a European reputation.

MM. MARTINERO AND CARRASCO.

Lately, at Zafra, Don Julian Perez y Martinero, Professor of Medicine in the General Hospital of Madrid, at the early age of 38. We have also to record the death of the senior physician of the hospital, Dr. Vicente Carrasco.

SIR DAVID J. H. DICKSON, M.D.

Sir David Dickson died at his residence, Dunford Street, Stonehouse, Devon, on the 2d inst., in the 69th year of his age. The deceased, who was Physician to the Royal Naval Hospital, and Acting Physician to the Fleet, had occupied with credit numerous offices, and during the war had discharged important services in various parts of the globe. He received his license from the Royal College of Surgeons of Edinburgh in 1798, and became a Fellow of the Edinburgh College of Physicians in 1816. He was admitted an Extra-Licentiate of the London College of Physicians in 1822. His active services commenced in the year 1806, and at various periods he was em-

ployed with our fleets in the West Indies, North America, and in the expeditions to Holland and Egypt. In 1834 he was knighted by William IV. for his services in the West Indies, and in 1840 he was made Inspector of Hospitals.

Sir David had contributed papers to several of the medical journals.

DR. KIDD.

On the 24th ult., after a few hours' illness, of bronchitis, Dr. Kidd, Inspector of Military Hospitals, after an active life devoted to the service of his country in various parts of the globe. He was much esteemed and respected by his brother officers.

Selections from Journals.

ACTION OF LIME ON ANIMAL AND VEGETABLE SUBSTANCES. BY JOHN DAVY, M.D., F.R.S.

On the action of lime on the textures of the human body.—It is commonly asserted and believed that lime exercises a corroding, destructive influence on animal matter in general, and that animal bodies exposed to its action rapidly decompose and disappear. Accordingly, it has been almost invariably recommended to add this earth to graves, in instances in which a rapid decay is considered desirable, as on the occasion of the crowding of grave-pits with dead bodies during the prevalence of pestilential diseases. From the results of many experiments which I have made with lime on animal substances, I have been compelled to come to the conclusion that this opinion is not well founded in fact; indeed, that it is altogether erroneous.

The experiments were commenced in Malta, in the summer of 1829, and they were carried on during the following year. The method observed was to immerse the animal matter for trial in cream of lime, or rather a paste of lime, contained in a wide-mouthed bottle, well corked and covered with cerate cloth, to exclude the ingress of atmospheric air, and to preserve the lime in its caustic state.

One of the first experiments tried was commenced on the 27th of August. Portions of various textures were immersed, as mentioned above. They were taken from a subject in a state of incipient putrefaction, and they inhaled a fetid smell. On immersion in the lime and water, as might be expected, they gave off a strong ammoniacal odour. They were first examined on the 24th of September. They were then all in excellent preservation, swollen but not corroded, nor their delicate tissue in-

jured. They were next examined seven months after, viz. on the 5th of May of the year following. The report was equally favourable. It is stated that they were much in the same state as before, the texture of each part distinct, and the part, as a whole, easily distinguishable. They were left undisturbed nearly two years, until the 6th April, 1832, when, on examination, they were found to have undergone material change. The cuticle had become soft and transparent, as had also the dura mater, admitting of being torn with the greatest ease. The muscle appeared to be converted into adipocere, which was quite white, had no unpleasant smell, was friable when dried, and burned with a bright flame, without any unpleasant smell. The other parts were not distinguishable. Most of the lime was converted into carbonate of lime, atmospheric air not having been entirely excluded.

The second experiment recorded was commenced in the beginning of October. Portions of aorta, dura mater, intestine, skin, cellular tissue, muscle, and tendon, were similarly treated. The results were examined on the 5th May following. Then, on opening the bottle, an ammoniacal but no putrid smell was perceptible. The parts were found well preserved, excepting the fatty matter contained in the cellular tissue, which had become of an opaque white, and friable, from combination with the alkaline earth, and conversion into soap. The tendon, it is mentioned, was somewhat distended, and rendered more transparent, but not gelatinized; and so, also, in a less degree, were the dura mater and cutis; and the last was deprived of its cuticle and hair.

Some other experiments were made; but, as the results were very similar, it would be tedious to describe them. I may state, generally, that, with the exception of cuticle, nail, and perhaps hair, lime exerted on the different textures on which it was tried no destructive power, but a contrary influence, and more particularly a well-marked antiseptic one. It has been stated how certain parts, in the first experiment, lost the putrid odour which they had acquired when immersed in lime and water. Moreover, it appears from notes of experiments that after animal substances have been fully subjected to the action of lime, they ceased to be putrescent: they resisted putrefaction, whether placed in air or plunged and kept in common water. I shall mention one instance. On the 13th of May, 1830, a portion of ileum, with mesentery attached, and a portion of the muscular part of the heart, with the chordæ tendineæ, were placed in a large jar of transparent lime-water, and so-

versed with cerate cloth. Examined nine months after, on the 16th of February, they were found in good preservation, and without any putrid or unpleasant odour. The only change perceptible was that the portion of heart and intestine had acquired a light greenish hue, and the tandon an opalescent hue; and all were a little softened. A crust of carbonate of lime had formed on the water, which still retained some caustic lime. They were then transferred to a jar of common water, where, after four days, they continued unaltered. I may add that a portion of cutis, similarly treated, placed in confined air in a bottle, after a whole month emitted no unpleasant odour, and appeared to be unchanged.

I have observed, that cuticle, nail, and perhaps hair, are to be excluded from the list of animal substances not materially altered by the action of lime. On the cuticle its action is powerful; and, I apprehend, in consequence of a chemical combination between them being formed. It is well known how lime has the property of rendering the cuticle easily separable from the cutis vera, and how, in the art of tanning, it is applied to this purpose. The human cuticle—that, for instance, of the sole of the foot—I find becomes soft and gelatinous from immersion in lime and water. After drying, a portion thus tried (well washed previous to drying) was white, semitransparent, and brittle. Incinerated, it yielded seventeen per cent. of ash, which consisted principally of lime and carbonate of lime.

The effect of lime on nail is similar to that which it exercises on cuticle, but not so strongly marked. A portion of nail of the great toe, macerated in lime and water, from the 7th of June to the 18th of August, was rendered soft and friable, a little swollen, and disposed to separate or break up in layers. Dried, it exhibited the same character as cuticle; and when incinerated, burned in a similar manner, and left a considerable ash, consisting of a small proportion of phosphate of lime, which pre-existed in the nail, and a large proportion of lime, with which, during the change from maceration, it may be inferred it combined.

On hair the effect of lime appears to be more destructive; but in what manner it acts I have not attempted to ascertain. A portion of human hair of the head, which had been kept in lime and water about three months, was partially decomposed. At the bottom of the vessel there was a little black sediment. The hair, which was black, had acquired a just perceptible reddish shade, and had become much finer, as

if wasted, and more friable, so as to be easily broken.

Relative to the results of the experiments generally, they appear to me to bear me out in the remark with which I prefaced them,—viz., that lime does not exercise a destructive corroding power on animal substances generally, nor one promoting their decomposition; but, on the contrary, a preservative and decidedly antiseptic power, arresting putrefaction even when commenced, and retarding decomposition. What new arrangements of the elements of animal matter may take place under the influence of lime is a subject for further inquiry. Probably the effects of lime on cuticle, nail, and hair, on which, in the arts, its operation has been best known, led to the ideas of its agency on animal substances generally, which I have been under the necessity of combating.

On the action of lime on vegetable substances.—Reasoning from analogy, from what I had witnessed of the effects of lime on animal substances, I was induced to question the views which are commonly entertained of the operations of this earth on vegetable matters, as its supposed power of facilitating their decomposition, and promoting their fermentation and solution. And the few experiments which I have made have more than confirmed me in my doubts.

As the subject is of very great importance in relation to agriculture, I shall describe the results which were obtained, using small quantities as most manageable, and best accordant with my limited means; hoping that my statements may induce others to repeat the experiments on a large scale, and extend them in a manner befitting the consequences involved.

The experiments were commenced in June 1836, and they were concluded in November 1838. I shall describe them individually.

On the 27th of June, 1836, one portion of sawdust, I believe of Norwegian fir, was put into a bottle, with distilled water and quick lime (the bottle was about half filled with the mixture), and corked.

Another portion of sawdust was put into a bottle with water and corked, but without the addition of lime.

Examined on the 1st November, 1838, the sawdust, with the lime, had no appearance of any material change: its colour, perhaps, was a little heightened; the water only just perceptibly coloured; it had a strong taste of lime; evaporated to dryness, it afforded a light yellow residuum, consisting chiefly of lime; the proportion of vegetable matter was hardly appreciable.

The other portion, examined after the

same interval, also exhibited very little change. A mucilaginous film had formed over the submerged stratum of sawdust, too delicate and small in quantity to be collected and examined in a satisfactory manner; the sawdust retained its colour, and the water was colourless. The water, evaporated to dryness, yielded a very minute brownish residue, slightly bitter, which had no effect either on litmus or turmeric paper. No smell was perceived on opening the cork of either bottle.

On the 17th June, 1836, some clover leaf and flower, and some leaf of the common mallow, were put into a bottle with quicklime and water; the bottle was corked, and the cork was covered with sealing-wax. The quicklime used was tested for carbonic acid, and found to be perfectly free from it, not effervescing in the slightest degree in dissolving in an acid. For comparison, two other mixtures were at the same time made of the same vegetables and water, and bottled, one of which was corked, being about half full of air, the other was not corked; a little cotton wool merely was put into the mouth of the bottle to exclude dust and prevent evaporation.

Examined on the 1st November, 1838; the mixture with the lime appeared to be but little altered; the leaves and the flower retained their form; the former were of a bright fresh green; the latter had become brown; the water was colourless; the lime had acquired a light greenish hue; it dissolved in dilute muriatic acid without giving off a particle of carbonic acid gas. The water evaporated yielded but a small residue, consisting chiefly of lime. The leaves and flower, though they retained their form, yet, when shaken in the bottle, were broken into small pieces, and the leaflets detached. Farther, it may be remarked, that the smell perceived on drawing the cork was similar to that of bruised clover.

The other mixtures, to which lime had not been added, exhibited different results. That which was corked, a portion of air included, examined on the 4th November, 1838, appeared much altered: there was at bottom a light greenish sediment; at top an almost black mass; and, suspended in the water intermediately, were the small flower-leaves, almost colourless. The water was greenish; and, when evaporated to dryness, yielded a small brownish extract; the leaves were in a pulpy state, and disorganised. The smell from the mixture was offensive, not unlike that of clover fermenting.

The mixture from which air was not excluded fermented soon after it was put by.

Ten days after, namely, on the 27th June, it was noted that the vegetable matter was rapidly decomposing with a very offensive odour, approaching to that of the putrid; that much gas had been disengaged, and a good deal of sediment had collected.

Examined on the 2nd November, 1838, it was found in a state very similar to that last described, bearing marks of advanced decomposition.

An experiment similar to that on the mallow leaf and clover was made with lime and water, on moss and lichen, and with a very similar result. It was commenced on the 23rd June, 1836, and terminated on the 1st November, 1838. The moss and lichen retained their form, and bore being shaken in the bottle without falling to pieces. The water had acquired a light greenish hue; the lime a brownish hue. The water evaporated afforded a small brownish residue, consisting chiefly of lime.

I shall mention one experiment more of the same duration, in which clover leaf and flower and mallow leaf were put into a bottle covered with hydrate of lime, and the access of air excluded by a cork and sealing-wax. Examined on the 2nd November, 1838, the flower was found brown; the clover-leaves of a very light green; the mallow of a dark green, and all very friable, falling to pieces when touched. The lime was examined both before and after for carbonic acid, and it was quite free from it at the commencement of the experiment, as it was also at the conclusion: it dissolved in an acid without the slightest effervescence, and appeared to be quite unaltered.

These results appear to me conclusive that lime does not promote the decomposition of vegetable matter; and, as I have before mentioned, that instead of promoting, it arrests its fermentation. The circumstance that no carbonic acid could be detected in the lime after having been in contact with vegetable matter, both with and without water, I apprehend may be considered as demonstrative on this point.

Whether lime has any solvent power on vegetable matter, apart from the supposed one of exciting fermentation, is a distinct question. From what I have witnessed in carrying on these experiments, I infer that it has, in a slight degree at least, in combination with water. The extract obtained by evaporating the lime-water which was in contact with the vegetable matter was, perhaps, indicative of this, especially in the instance of the sawdust, as was also the softened state of the leaves and flowers, falling to pieces on being shaken; and con-

firmation, perhaps, is afforded in the results of two comparative experiments made on the same leaves and flower, with magnesia and water, and a solution of carbonate of potash (the old subcarbonate). Both mixtures were made on the 23rd June, 1836, and they were both examined on the 4th November, 1838. There was a marked contrast between them. The leaves and flower with the magnesia water retained their form unaltered, and their texture did not appear to be materially weakened: they bore being shaken in the bottle without falling to pieces, and the water was only just perceptibly coloured greenish, and the magnesia brownish, the leaves retaining their colour unimpaired. The leaves and flowers, on the contrary, in the alkaline solution, were reduced to small pieces, and seemed to be wasted and deprived very much of their colouring matter, and in a pulaceous state; the solution was of a dark olive green: evaporated, it yielded a residue abounding in colouring matter. Lime in its solvent power is probably intermediate in degree between magnesia and the more active alkali, more active even in combination, with one proportion of carbonic acid, than the magnesia, or even lime in a caustic state.

The application of the preceding results to agriculture, in relation to manures, I must decline discussing. The subject is one of too much importance, and magnitude, and difficulty, to be lightly entered on.—*Jameson's Edinburgh Journal*, January.

CASE OF TRISMUS NASCENTIUM. BY SAMUEL CHAMBERLAIN, M.D.

MARTHA J. TURBOT, *et.* four weeks, in the care of a wet-nurse. The mother finding her child's "hands cold, and arms quite purple or black," suspected that the wet-nurse had given it laudanum: last evening she had left it well, in the nurse's hands. The child was not asleep, nor did it seem heavy and stupid, as if suffering under the effects of laudanum; the eyelids were partly open, and the eyes occasionally turned upwards as if in convulsions; respiration was slow and moaning (the expiration prolonged); it was purely vesicular throughout, and the lungs were fully expanded; pulse distinct. The complexion was purple, and the veins on its arms very conspicuous. The hands were forcibly contracted, and the thumbs drawn in towards the palms. It refused to suck my finger, which I placed in its mouth, and the mother stated that she could not make it suck. The jaw was not fast closed, but was somewhat stiff when I attempted to introduce my finger. These symptoms reminding me of Dr. Sims' theory of the Cause of

Trismus Nascensium,* I examined the occiput and found it *below the parietal bones*; both edges were depressed; the parietals riding over the occipital for half the length of the lambdoidal suture. I laid it carefully on its side, relieving the occiput of all pressure, and the child immediately began to suck its own lip. A warm bath (that the mother might not think "nothing was done"), and to keep it carefully on its side, was the only treatment directed.

Three hours after, I found the child wrapped carefully, after the warm bath, and lying in the mother's arms. All thought it dying. It had "turned blue several times," and became so "whenever the milk was given it." A bluish colour under its eyes was very conspicuous. The mother milked her breast, and poured a spoonful into its mouth; immediately the lips, face, and forehead became blue, and it seemed almost strangled in the attempt to swallow; but this "*blue spell*" was declared by those around to be much less severe than the "*spells*" in my absence. The difference was this, that I held the child myself, and supported the side of its head; the mother had held it upon her arm, "*diagonally*," and the weight of its head came chiefly upon the occiput; she was holding it thus, when I took the child from her, so this is not a mere inference. The pupils were contracted now, and the child breathed with a croupy inspiration. *Treatment*.—To keep it on a pillow, and on its side carefully.

Third visit, about three hours later.—It has had one or two more "blue spells," but none so severe as at the last visit. The mother had again taken it and held it, as before, on her arm diagonally; the occiput bearing the weight of its head in some degree. On my taking it from her, raising it by the feet, and with my thumb and forefinger at the back of its neck (as with a child at birth), complete opisthotonos took place; the head was thrown strongly backwards, and remained so. I had incautiously made greater pressure upon the occiput; for not only the head, but part of the body was now supported by it. The child made a feeble effort at defecation, and passed some wind. There was no more stridulous breathing. *Treatment*.—I now laid it myself carefully on the pillow, and insisted that it should not be taken up for any purpose, but fed while lying. A teaspoonful of castor-oil was the only medicine ordered.

July 29th.—The mother reports one or two "*spells*" since the last visit; but that at 12 o'clock in the night a change for the better took place. She suckled it in the

* American Journal of Medical Sciences, April 1846.

sight. I found the child lying accurately on its side, the whole side of the head and face applied to the pillow, and the occiput relieved of all pressure. Her breathing free, easy, and regular; her hands both open; the skin red and of a healthy colour; and no appearance whatever of impeded circulation. A careful examination of the occiput shows that it has risen *very nearly* to the level of the parietal bone; there is still, however, a slight depression, and it is still *below*, not over-riding them. I therefore explained the danger, and directed the mother to keep it still carefully on its side.

August 11th.—The child has been under occasional notice up to this date. It remains well. The occiput is still below the parietals, as may be detected by a careful examination; it is much nearer the level than when I first felt the head. Having frequently seen the mother carrying the child with its head always raised, and never otherwise, I conclude that her careful observance of the directions has prevented any renewal of the attack. Her removal has prevented any further observance of the case.—*American Journal of Medical Sciences.*

INFLUENCE OF THE NERVOUS SYSTEM ON NUTRITION, AND ON THE URINARY SECRETION.

M. BERNARD announced to the Academy of Sciences, that, on puncturing a limited space in the fourth ventricle, a little above the origin of the eighth pair of nerves, the urine of the rabbits on which the experiments were performed became diabetic in the course of an hour and a half. M. Bernard is engaged in the further prosecution of these experiments.—*Gazette Méd.* x

BOOKS & PERIODICALS RECEIVED FOR REVIEW.

Has Marischal College, in New Aberdeen, the Power of conferring Degrees in Divinity, Law, and Medicine? Aberdeen, 1850.

Henke's Zeitschrift. 1849. 4tes Vierteljahrheft und Ergänzungsheft.

Chaper's Woehenschrift. Nos. 48, 49, 50, and 51; 1st to 22d December.

Boston Medical and Surgical Journal. January 1850.

Notes of Experiments, with Thoughts of Electricity. By C. Chalmers.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.57
" " Thermometer 31.1
Self-registering do. Max. 50.0 Min. 20.0
" From 12 observations daily. " Sum.

RAIN, in inches, .54.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 5° below the mean of the month of January.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Jan. 12.

BIRTHS.		DEATHS.	
Males....	693	Males....	546
Females..	700	Females..	610
1393		1156	

CAUSES OF DEATH.

ALL CAUSES	1156
SPECIFIED CAUSES	1149
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	193
Sporadic Diseases, viz.—	
2. Dropsy, Cancer, &c.	46
3. Brain, Spinal Marrow, Nerves, and Senses	129
4. Heart and Bloodvessels.....	51
5. Lungs and organs of Respiration	263
6. Stomach, Liver, &c.	58
7. Diseases of the Kidneys, &c.	9
8. Childbirth, Diseases of Uterus, &c.	18
9. Rheumatism, Diseases of Bones, Joints, &c.	7
10. Skin.....	4
11. Old Age.....	73
12. Sudden Deaths.....	7
13. Violence, Privation, Cold, &c....	27

The following is a selection of the numbers of Deaths from the most important special causes :

Small-pox.....	7	Convulsions.....	45
Measles.....	37	Bronchitis.....	131
Scarlatina.....	17	Pneumonia.....	85
Whooping-cough....	43	Phthisis.....	157
Diarrhoea.....	10	Lungs.....	8
Cholera.....	0	Teething.....	8
Typhus.....	33	Stomach.....	8
Dropsy.....	17	Liver.....	2
Hydrocephalus.....	29	Childbirth.....	5
Apoplexy.....	33	Uterus.....	4
Paralysis.....	31		

REMARKS.—The total number of deaths was 15 below the average.

NOTICES TO CORRESPONDENTS.

THE GENERAL INDEX.—We regret with our correspondent, Mr. Barrett, that the demand for a general Index of the Old Series of the GAZETTE has not been such as to justify the publishers in undertaking the publication. The names do not reach one-third of the number required; and we fear the proposition of raising the price would not increase the number.

The papers of Mr. Barlow, Mr. Teale, and Dr. Child, will be inserted in the following number. We are obliged to Dr. Trayer for the communication which he has forwarded.

Dr. Barnes's letter shall be inserted next week.

RECEIVED.—Mr. Paget, Dr. Dick, Mr. Rumsey.

CORRIGENDA.—In last number, p. 118, col. 1, line 9 from top, for "Rio Nan or Querra," read "Rio Nun or Quorra."—Page 123, col. 1, line 11 from foot, for "surprise of," read "surprise at";—17 lines from foot, for "panacea," read "panacea";—Col. 2, line 15 from foot, for "operations," read "investigations."—Page 127, col. 1, l. 11 from top, for "Seun," read "Senn."—P. 131, col. 1, line 2, for "Pofessor," read "Professor";—Col. 2, line 11 from foot, for "stranguary," read "strangury."

Lectures.

COURSE OF LECTURES

ON

DISEASES OF THE HEART.

Delivered at St. Vincent's Hospital during the Session 1849-50.

By O'BRYEN BELLINGHAM, M.D.

Fellow of, and Professor in, the School of the Royal College of Surgeons in Ireland, and one of the Medical Officers of the Hospital.

LECTURE III.

The pericardium—Fibrous layer of—Serous layer of—Cardiac fascia—White patches on visceral layer of pericardium—Seat of—Nature and causes of—Conclusions respecting—Dimensions of the heart—Normal size of the organ—Length of the heart—Breadth of the heart—Conclusions respecting the size of the heart—Weight of the healthy heart. Absolute weight of the organ. Ratio of the weight of the heart to the entire body. Comparative weight of different parts of the heart to each other.—Conclusions respecting the weight of the heart.

The pericardium.—The pericardium belongs to the class of fibro-serous membranes, and consists of two layers, an external fibrous and an internal serous. The fibrous layer is strong and resisting, though having but little thickness: it forms what is called the sac of the pericardium, and encloses the heart and the origin of the large vessels which come off from its base. The serous layer is thin and delicate in comparison: it closely invests the heart, covers the origin of the large vessels, and is then reflected upon the internal surface of the fibrous layer, which it lines throughout. Thus, as is the case with other serous membranes, the heart, although invested by the pericardium, is not contained in its cavity.

The pericardial sac has a pyriform shape, the base below, the apex above; exactly the reverse of that of the heart. Its base is on a line with the upper part of the xyphoid cartilage; its apex a short distance above the origin of the large vessels, and generally on a line with the articulation of the cartilage of the second ribs with the sternum. I have, however, found it to extend, in a healthy subject, as high as the level of the articulation of the first ribs with the sternum. Its apex is higher upon each side of the aorta than immediately opposite to that vessel. The pericardial sac is wider in the centre than at its base,

and here it extends more to the left side. Its widest part is on a line with the greatest transverse diameter of the heart.

Capacity of the pericardium.—The capacity of the pericardial sac is somewhat greater than the volume of the heart; and, as its cavities are never all distended at the same moment, there is always abundant room for the apex and body of the organ to move freely in it. For the same reason, effusion of fluid to a moderate extent may take place into the cavity of the pericardium without interfering much with the heart's movements, provided it is effused slowly and gradually. On the other hand, even a moderate amount of fluid suddenly effused will be attended with formidable symptoms, because the fibrous nature of this membrane does not permit of its yielding suddenly. In chronic cases of disease, however, the pericardial sac is capable of becoming enormously dilated, as we shall afterwards see.

The actual capacity of the pericardium has been endeavoured to be determined by injecting fluid into and forcibly distending its sac. Dr. Sibson, in a recent number of the London Journal of Medicine, has given the following table of the results of some experiments made by him:—

Boy <i>æt.</i> 6, pericardium injected	to distension, held .	6 oz.
" 9, ...	"	6 oz.
" 13, ...	about	6 oz.
Adult male	"	15 oz.
Male aged 50	"	22 oz.
Adult female (heart enlarged) .	"	26 oz.

"From these and other observations (Dr. Sibson says) it may be inferred that in the adult, when the heart is healthy, the pericardium, when fully distended, can contain from twelve to fifteen ounces of fluid." "It is worthy of remark (he adds) that the right cavities of the heart in the adult male, when distended, hold the same quantity of fluid as the pericardium."

Fibrous layer of pericardium.—The fibrous layer of the pericardium is dense and strong, and is composed of tendinous fibres, some of which run vertically from the base towards the apex, others cross each other in various directions. Its tissue is semi-transparent, permitting the heart to be seen through it. It is very intimately united inferiorly to the central tendinous aponeurosis of the diaphragm: the fibres of each (as Lancisi observed) mix, and are confounded with one another; so that the pericardium seems as if it were a prolongation of this aponeurosis. It is also connected with the fleshy portion of the diaphragm on the left side; but the adhesion here is less intimate. Superiorly the fibrous layer of the pericardium is closely united

to the trunks of the large vessels which come off from the base of the heart. It gives them sheaths; and, after accompanying them for a short distance, it becomes continuous with the thoracic fascia. The inferior cava alone receives no fibrous sheath from it. Anteriorly a small portion of its surface is only separated from the sternum by cellular tissue. Laterally it is connected with the pleura upon each side, the phrenic nerve on the left side being interposed. Posteriorly, the pericardium, which is of small extent compared with its anterior surface, lies in front of the posterior mediastinum, being separated from the bodies of the dorsal vertebrae by the oesophagus and descending aorta.

The fibrous layer of the pericardium does not form a complete capsule for the heart; it is deficient inferiorly, where it is replaced by the central tendinous aponeurosis of the diaphragm; the reflected serous layer, which is attached to this part of the diaphragm, forming its capsule here. Owing to its density and strength the fibrous layer of the pericardium serves both to support and to limit the motions of the heart; while, it retains it in situ. From its firm attachments, above, below, and laterally, if, as not unfrequently happens from disease, the opposed serous surfaces become adherent to one another, the motions of the heart must be, in a certain degree, interfered with.

Serous layer of pericardium.—The serous layer of the pericardium which invests the heart is thin and delicate compared with the fibrous layer. It consists of two layers, a proper serous and a fibrous layer: the latter forms the capsule of the heart; the former, after covering the heart, ascends, for an inch and a half to two inches, upon the aorta, and upon the pulmonary artery as high as its bifurcation, where it is reflected upon the internal surface of the pericardial sac. Hence the greater portion of the ascending part of the arch of the aorta is said to be within the sac of the pericardium; and hence aneurism of this part of the vessel occasionally bursts into it. Where the serous layer lines the sac of the pericardium it is very intimately adherent to it; where it covers the origin of the large vessels it is much less so. Inferiorly, where the fibrous portion of the pericardial sac is deficient, the serous layer lines the central aponeurosis of the diaphragm.

Cardiac fascia.—The serous layer of the pericardium, which invests the heart, was also described as a single membranous layer, until Dr. Robert Lee* demonstrated two layers in it, which are connected to-

gether by cellular tissue. The outermost of these layers is the proper serous coat: the inner layer, from its structure and function, and from the important office which it performs, Dr. Lee considers may be regarded as the fibrous membrane or fascia of the heart.

This expansion "is possessed of great strength and firmness. It is glistening, semitransparent, and resembles in all respects the aponeurotic expansions, or fasciae covering muscles, in other parts of the body." "It is much stronger over the ventricles than the auricles, and it adheres so firmly to the muscular substance underneath that its separation cannot be effected without tearing up some of the muscular fibres to which it is attached." "From the inner surface of this fascia innumerable strong fibres pass to the blood-vessels, nerves, muscular fasciculi, and adipose matter, which accompany and surround all the blood-vessels and nerves; and they are interlaced together so as to form a peculiar stroma, if it may be so termed, of considerable thickness, between the fascia and all the various structures beneath, which it invests and binds together in the strongest possible manner. These fibres form a complete sheath around all the arteries, veins, and nerves, on the surface of the heart, and accompany them as they dip down between the muscular fasciculi, to which their branches are distributed throughout the entire walls of the heart, from its surface to the lining membrane."

"The cardiac fascia," Dr. Lee observes, "is obviously one of the principal causes of the firmness and strength of the central organ of the circulation, as it binds together into one mass, and gives support to the muscular fibres, like the fascia which invests other muscles." "The cardiac fascia is to the heart, I believe, what the external fibrous coat is to an artery; and it must have nearly the same effect in preventing dilatation and rupture of the ventricle during violent exertion." "The feeble serous covering of the heart can possess little influence, and add nothing to the strength of the parietes; and probably, but for the fascia now described, the heart would often yield in all directions, especially at the apex. In a physiological point of view, it therefore has appeared to me that this fascia of the heart is one of its most important strictures."

"In a pathological point of view," Dr. Lee observes, "the cardiac fascia is perhaps not less worthy of notice. Muscular structure, it is well known, is not liable to attacks either of common or of specific inflammation. It is impossible to avoid suspecting that rheumatic inflammation of the heart has for its principal seat this dense

* Philosophical Transactions, 1848.

fibrous membrane lying between the serous and muscular coats of the heart, and that attacks of rheumatism of the heart do not commence primarily in the muscular structure."

The opposed serous surfaces of the pericardium are very smooth, and constantly lubricated: hence in the normal condition of the parts they glide over one another during the motions of the heart without producing sound. If, however, as is not unfrequently the result of disease, these surfaces become rough or uneven, increased friction must take place between them during the heart's motions, and sounds will be developed which become audible when the ear or the stethoscope is applied to the parietes. These constitute the pericarditic friction sounds, afterwards to be considered.

Owing to the intimate connection of the pericardium inferiorly with the diaphragm, it must follow the movements of the latter; and from its attachments above and below, its shape and state of tension must be somewhat different during inspiration and expiration; while if much fluid be effused into its sac, not only will the movements of the heart, the ascent of the diaphragm, and the expansion of the lungs, be more or less interfered with, but the lungs will be pushed aside, a larger surface of the pericardium will come in contact with the parietes of the chest in front, and the region of the heart's superficial dullness on percussion will be increased in proportion. The effect of the forcible distension of the pericardium, in Dr. Sibson's experiments, was to make the central tendinous aponeurosis of the diaphragm convex towards the abdomen, and to lower this part about one inch.

White patches on pericardium.—Nothing is more common than to find upon the serous layer of the pericardium, where it invests the anterior surface of the heart, a white patch, of variable size and shape: indeed, it is so frequent, and it is so often found in hearts which in other respects are perfectly healthy, that it has been regarded by some as a natural appearance.

The anterior surface of the right ventricle is its most frequent seat: occasionally it is observed upon the surface of the left ventricle, or upon both ventricles, and occasionally upon the auricles. Frequently only one exists, sometimes several are seen upon the same heart; they have an opaque white colour; the shape is very variable; it is often somewhat circular or oval, occasionally more or less linear, and extending in the line of the coronary vessels. The size of these patches varies from a fourpenny piece to a crown, or even larger: when one only is present, it is usually larger than when several occur upon the same heart.

They are much more common in the adult than in early life, but have been observed in the infant under three months; they are larger and better marked in advanced life, and they are much more common upon the male than the female heart.

Seat of the white patches.—Some difference of opinion exists among pathologists as to the exact seat of these opaque patches, some placing it upon the free surface of the pericardium, others upon its under surface, and others in the proper tissue of the membrane. Thus Baillie, Laennec, Louis, and Todd,* state that these opaque patches can easily be dissected or peeled off from the visceral layer of the pericardium, leaving this membrane entire. Corvisart, on the other hand, says, that these patches are seated upon the under surface of the membrane, and that they cannot be dissected off without bringing the pericardium with it. Dr. Hodgkin says, he has met with a few instances where they might be dissected off; but in by far the greater number of cases these patches depend on a deposit on the attached surfaces. Mr. T. W. King considers the actual seat of the deposit to be the proper tissue of the serous membrane. Mr. Paget† says, these patches are "generally easily stripped off; but in no case after they are organized can they be separated from the subjacent tissue without dividing numerous connecting filaments, and leaving the surface from which they are removed flocculent and shreddy."

Nature and causes of.—A similar diversity of opinion exists among pathologists respecting the nature and cause of these opaque patches. By some they are referred to inflammation, and supposed to be always the result of partial pericarditis. Mr. Paget, who advocates this view exclusively, observes, "with these spots there almost constantly coincides some adhesion by organized lymph between adjacent parts of the pericardial membrane." "The adhesions generally consist of slender threads passing across the furrow between the aorta and vena cava superior, or between the aorta and pulmonary artery at some little distance from their connection with the heart." In 40 cases noted by Mr. Paget, in which white patches were found upon the heart, 35 presented abnormal adhesions, or their remains.

If these opaque patches were always the result of inflammation, pericarditis, in a latent form, must evidently be a much more frequent disease than is commonly supposed; but as in the majority of cases the serous membrane at the part preserves its smooth and glistening appearance, the

* Cyclopædia of Anat. and Physiology.

† Med. Chir. Trans. vol xxii.

opacity can hardly be due to lymph deposited upon it; besides, adhesions between the visceral and the reflected layers of the pericardium, instead of being very rare in connection with these patches, ought to be frequent, if they were always the result of the deposition of lymph.

Other pathologists regard these opaque patches as the effect of attrition between the surface of the heart and the parietes of the thorax; as they are found most frequently upon the anterior surface of the right ventricle. Dr. Hodgkin* is of opinion that pressure is their cause, and that they are the result of a kind of inflammation originating in attrition and irritation. Mr. T. W. King† says, "the situation of these patches wherever they occur, implies to my mind a degree of attrition at the part more than belongs to the pericardium generally," and he suggests the name "patches of attrition," or "patches of distension" for them. It militates, however, against this theory, that these white patches are not unfrequent upon parts of the heart where attrition cannot take place.

Other pathologists are of opinion that these patches are not to be regarded as a pathological phenomenon, because they are found on the most healthy hearts, and where the patient has never laboured under any affection referable to the heart; and because similar opaque patches are found upon other viscera which are covered by serous membrane; as the liver, intestines, &c.

M. Bizot, whose researches have tended to elucidate many doubtful points connected with the normal anatomy of the heart, has shown‡ that these white patches are of two descriptions, one a morbid secretion of the serous membrane, probably consecutive to inflammation; the other is not a product of inflammation, but appears to

be in some way connected with the progress of age.

The first variety, which is the rarest, is found indifferently upon every portion of the pericardium covering the auricles and ventricles; it has its seat upon the free surface of the membrane, and can be detached without difficulty from the serous membrane underneath, which preserves its natural appearance.

The second variety is usually found upon the anterior surface of the right ventricle, and has its seat in the serous membrane itself, which undergoes a slow transformation, becomes slightly thicker in the centre, and gradually loses its transparency; if we try to detach the serous membrane at the part, the opaque patch is removed with it. This is the most frequent variety; M. Bizot states that in 156 subjects he found it 45 times; it is much more frequently met with in the male than in the female: in 72 males it occurred 31 times, in 84 females only 14 times. Mr. Paget's researches likewise show that these patches are more common in the male than the female.

The anterior surface of the right ventricle is the most frequent seat of this variety. In 45 instances, noted by M. Bizot, it occupied the centre of the anterior surface of the right ventricle in 20; in 18 it occupied also the anterior surface of the left ventricle; in 7 only it was found exclusively upon the left ventricle. The influence of age upon its development is also remarkable; it was not found in the male under 17 years of age, or in the female under 22. After 40 years of age, in both sexes, these patches were not only better marked, but larger.

The following table, given by M. Bizot, shows its frequency at different ages, and in the two sexes:—

MALE.			FEMALE.		
Age.	No. of subjects.	No. of examples.	Age.	No. of subjects.	No. of examples.
1 to 17	16	0	1 to 22	31	0
18 „ 39	24	8	23 „ 30	23	5
40 „ 79	32	23	40 „ 89	30	9

Conclusions.—There can be no doubt that the opaque white patches which are found upon the visceral layer of the pericardium have not always the same origin. That they are sometimes the result of inflammation is more than probable, because

several patches are occasionally present, and the opacity extends along the course of the coronary vessels on both sides of the heart, particularly along the veins; adhesions likewise will be found between the base of the auricular appendices and adjoining parts, or between the aorta and pulmonary artery, as described by Mr. Paget. In these cases a slighter degree of opacity or a haziness of the membrane will

* Lect. on Morb. Anat. of Serous Membranes.

† Guy's Hosp. Reports.

‡ Mém. de la Soc. Méd. d'Observation. Tome i.

be observed in addition around the patches: they can be dissected off, but the surface from which they are detached is flocculent and uneven. The seat of the deposition of the lymph appears to be rather under the serous layer of the pericardium than upon its free surface, and may probably be upon the cardiac fascia described by Dr. Robert Lee.

The other variety, which is never seen in young subjects, appears to be the result of some peculiar alteration or degeneration of the transparent tissues connected with advanced life, and analogous to the *arcus senilis*: it probably commences in the serous layer of the pericardium itself; it is much more frequent than the other; its ordinary seat is upon the anterior surface of the right ventricle; and the older the subject, the more marked in general is the opacity.

Dimensions of the Heart.

Normal size of the heart.—In order to determine whether the heart is increased or diminished, or preserves its normal dimensions, it is absolutely necessary to have correct ideas respecting the size and weight of the heart; but as these vary with the age of the subject and with the sex of the individual, it is obvious that we can have no single standard for the adult heart.

Laennec laid it down that the closed hand of the subject was pretty nearly a mark of the size of the heart. This, however, is far from being the case: the heart of the infant at birth is larger than its closed hand, while the size of the hand varies according to the nature of the occupation of the person. It was supposed at one time that stature had considerable influence upon the size of the heart, and that this organ was always larger in tall than in short persons, in consequence of the greater distance to which the blood has to be transmitted. M. Bizot has, however, shown that stature has not the influence which was once supposed, and that whatever it exerts is rather in the opposite direction, the absolute size of the heart in both sexes being slightly less in tall persons: this, however, has been denied by M. Bouillaud. According to M. Bizot, the breadth across the shoulders has a greater influence than stature; the mean size of the heart and the width of the shoulders in both sexes being in a pretty regular ratio.

That the heart increases in size with the age of the individual,—that in advanced life it is larger than in the adult,—and that it is larger in proportion in the male than the female at every age,—has been satisfactorily proved by M. Bizot. The results of accurate measurements of the heart in

156 individuals of all ages given by him, show that this organ regularly and progressively increases in all its dimensions—length, breadth, and thickness—up to the latest period of life; the increase being more rapid before twenty-nine years of age than after that period; and that the heart of the female at every period of life is smaller than that of the male.

The late Dr. Clendinning, whose researches were carried on about the same time, but without any knowledge of M. Bizot's labours, arrived at very nearly similar conclusions: his inquiries were particularly directed to determine the absolute weight of the heart in health and disease, as well as its relative weight to the entire body. Dr. Ranking, likewise, from the examination of a number of healthy hearts, and M. Neucourt from researches carried on at the Salpêtrière, in the service of MM. Valleix and Beau, have been able to corroborate some of M. Bizot's conclusions. M. Neucourt's examinations were limited to females in advanced life.

Length of the heart.—The length of the healthy heart in the adult, according to Meckel, measured from the centre of the auricles, is between five and six inches, four of which are for the ventricular, and one and a half for the auricular portion. Senac considered from three and a half to four inches to be the average length of the ventricular portion of the heart. According to M. Bouillaud, the mean length of the heart, from the base of the left ventricle or from the aortic orifice to the apex of the organ, in nine subjects was three inches seven lines and three-quarters. Dr. Ranking,* from an accurate examination of thirty-two healthy hearts (fifteen male and seventeen female), gives as the mean length of the heart, measured from the point where the aorta emerges to the apex of the organ, four inches and one-third for the male, and three inches and a half for the female. In my examinations, the length of the heart, measured from the summit of the appendix of the right auricle to the apex of the left ventricle, ranged from four inches and a quarter to five inches and a half. I look upon five inches and a half to be the full length of the healthy adult heart.

Breadth of the heart.—The breadth of the heart across the base of the ventricles Meckel considers to be three inches; Senac, between two and two inches and a half; M. Bouillaud states that the average in eight hearts was three inches seven and a half lines, and the mean circumference at the base of the ventricles eight inches nine lines and three-sevenths. Dr. Ranking

gives the mean circumference of the base of the heart in the male as slightly above nine inches and a half; in the female, about eight inches and a quarter. In the examinations which I have made, I have found the breadth of the heart across the ventricles to range between three inches and a quarter and four inches.

The following table, given by M. Bizot,

MALES.					FEMALES.				
Age.		Number of subjects.	Length.	Breadth.	Age.		Number of subjects.	Length.	Breadth.
1 to 4	7	22 $\frac{1}{2}$	27	...	8	22 $\frac{1}{2}$	25 $\frac{1}{2}$	...	...
5 " 9	3	31 $\frac{1}{2}$	33	...	10	26 $\frac{1}{2}$	29	...	...
10 " 15	3	34	37	...	5	29 $\frac{1}{2}$	31 $\frac{1}{2}$	...	...
16 " 29	18	42 $\frac{1}{2}$	45 $\frac{1}{2}$	...	14	38 $\frac{1}{2}$	42 $\frac{1}{2}$	...	...
30 " 49	23	43 $\frac{1}{2}$	47 $\frac{1}{2}$	...	27	41 $\frac{1}{2}$	44 $\frac{1}{2}$	...	...
50 " 79	19	45 $\frac{1}{2}$	52 $\frac{1}{2}$	...	50 to 89	19	42 $\frac{1}{2}$	46 $\frac{1}{2}$	...

Conclusions respecting the size of the heart.—From the preceding details it appears that—

1. The heart in both sexes gradually and progressively increases in size from infancy to old age; the increase being more rapid up to twenty-nine years of age than after that period.

2. The heart of the male is larger in all its dimensions, at every period of life, than that of the female; and the ratio is nearly the same at all ages except infancy.

3. The breadth across the base of the ventricles exceeds the length of the ventricles at every age, and in both sexes.

4. The mean length of the ventricular portion of the healthy heart of the male, at the period of life when this organ attains its maximum development, is slightly under three inches ten lines; in the female, under three inches seven lines.

5. The mean breadth of the ventricular portion of the healthy heart of the male in advanced life is below four inches five lines; in the female, below three inches eleven lines.

6. In persons of elevated stature the absolute size of the heart is not only not greater than in individuals of medium height, but, from M. Bizot's researches, appears to be rather less.

7. The capacity of the thorax, indicated by the width of the shoulders, has a greater influence upon the size of the heart than stature; and this organ is larger, as a general rule, where the shoulders are wide apart than in individuals with narrow shoulders.

Weight of the healthy heart.—Lancisi was the first to endeavour to determine the normal condition of the heart by weighing it; but until within the last few years we

shows the progressive increase in length and breadth of the heart from infancy to old age, as well as the comparative size of the heart in the male and female at different ages. The measurements are given in lines; the length is measured from the base of the ventricular portion to the apex; the width, at the part where the auricles and ventricles join one another.

had no positive information respecting either the absolute weight of the healthy heart, or the ratio which the weight of the heart bears to that of the entire body; and it is to the researches of the late Dr. Clendinning that we are principally indebted for statistics under these heads. He has shown* that the absolute weight of the healthy heart varies with the age and sex of the subject; that in the female the weight is always below that of the male; and that in the male the weight increases gradually with the years as life advances; while in the female, although the absolute weight is rather less in old age than about fifty, the relative weight to the entire body increases as life advances after that period.

Absolute weight of the heart.—Sensac considered the weight of the healthy heart of the adult to be between eight and ten ounces. Meckel lays down ten ounces as its average weight; Lobstein estimated it at between nine and ten ounces; Cruveilhier at between six and seven ounces; and Sanson at eight ounces and a half. Bouillaud says we may fix the mean weight of the heart in the adult between twenty-five and sixty years of age, at between eight and nine ounces: in thirteen cases given by him, the average was eight ounces three drachms, the maximum being eleven ounces, and the minimum being six ounces two drachms: the former, he observes, belonged to a subject of colossal stature, and of strong constitution; the latter to a subject of only sixteen years of age.

The following table, given by Dr. Clendinning,† shows the net average weight of

* Med. Chir. Transactions.

† MEDICAL GAZETTE, Vol. xxii.

the healthy heart at different ages, in the two sexes. Forty-eight of the subjects were males, and ninety-eight females; none are included in the table in which the weight of the heart reached eleven ounces avoirdupois:—

Age.	Male.	Female.
15 to 30 . . .	8½ oz.	8½ oz.
30 to 50 . . .	8½	8½
50 to 70 . . .	9½	nearly 8
70 to 100 . . .	9½	8

Ratio of weight of heart to the body.—The ratio which the weight of the heart bears to the entire body is different at different ages, and in the two sexes. According to Meckel, in the infant soon after birth the ratio is as one to one hundred and twenty, while in the adult it is as one to two hundred. But, as Dr. Clendinning remarks, Meckel has not given particular observations, and possibly did not pay sufficient attention to differences of age, sex, and disease. The following table, given by Dr. Clendinning, shows the ratio which the weight of the heart bears to the entire body at different ages, and in the two sexes. This table includes twenty-three subjects under puberty, most of whom were under five years of age: forty-two males and fifty-eight females above puberty:—

Age.	Male.	Female.
Under puberty . . .	1 to 146	1 to 153
15 to 30 . . .	1 to 164	1 to 169
30 to 50 . . .	1 to 150	1 to 161
50 to 70 . . .	1 to 161	1 to 187
70 and upwards . . .	1 to 155	1 to 121

"The absolute weight of the healthy heart may therefore," Dr. Clendinning observes,* "be assumed to average for the whole of life above puberty, about nine ounces for the male, and eight ounces, or a little more, for the female; and to bear after death to the entire body the ratio of about one to one hundred and sixty for the male, and one to one hundred and fifty for the female." So that a male adult heart considerably exceeding the 160th part of the whole subject, might, for a person of the working classes, and of ordinary fatness, but of much muscularity, be held to be normal; while a heart of like absolute dimensions, but occurring in a subject of average stature and muscularity, would be justly considered hypertrophous, although, owing to general obesity or cedema, it should not exceed, or should even fall short of, the 160th part of the weight of the person. And this observation applies, *mutatis mutandis*, to the female; in whom, I think, the extremes of obesity and lean-

ness more frequently occur than in the male." "The female stature and muscular development vary considerably less than the male, and the limits of normal nutrition, and the volume of the heart, are consequently narrower; so that any female heart greatly exceeding eight ounces in weight or volume may *ipso facto* be suspected of hypertrophy, whatever may be its apparent anatomical condition; and but few instances indeed, if any, will be met with, I apprehend, of female hearts exceeding nine ounces in volume, or nine and a half in weight, in the persons of individuals of ordinary stature and conformation, that had been quite free from pectoral disease during their lives."

Comparative weight of parts of the heart.—

We possess but few statistics bearing upon the comparative weight of the several parts of the heart one to another. According to Valentin, the weight of the left ventricle is double that of the right; and he calculates from this that the force exerted by the right ventricle in its systole is only half that of the left; allowing two-thirds of the force of the septum to the left ventricle and one-third to the right. Ludwig states as the result of weighing the muscular substance of the ventricles, in both a moist and dry state, that the tissue of the left ventricle contains much less water than the right; consequently it has a much greater relative weight when dried.

Conclusions respecting the weight of the heart:—

1. The absolute weight of the heart increases with the years, as life advances, in a very perceptible manner in the male. In the female there is no increase in its absolute weight after fifty years of age.
2. The absolute weight of the heart is greater in the male than the female at every age.
3. The average absolute weight of the healthy adult heart may be set down as nine ounces for the male, and eight ounces, or a little more, for the female.
4. The ratio which the weight of the heart bears to the entire body is different at different ages, and in the two sexes.
5. In infancy, in both sexes, the ratio of the weight of the heart to the entire body is greater than in the adult. In advanced life it is greater than at the middle periods.
6. In the female in advanced life the ratio of the weight of the heart to the entire body is much greater than in the male at the same period of life.
7. In estimating the weight of the heart, in doubtful cases, the relative as well as the absolute weight of the organ ought to be taken.

Original Communications.

OBSERVATIONS ON THE
MUSCULAR CONTRACTIONS
WHICH OCCASIONALLY HAPPEN AFTER
DEATH FROM CHOLERA.By WM. FREDERICK BARLOW, M.R.C.S.
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Hospital.

PART II.

WHEN I published my observations on the muscular contractions which occasionally happen after death from cholera,* I by no means flattered myself with the completeness of my contribution: on the contrary, I felt that, so far as their mere *history* was concerned, much remained to be supplied. It is in the hope of further illustrating a subject of so deep an interest, and so much in need of fuller investigation, that I beg the attention of the profession to some more facts respecting it.

Since the appearance of my short remarks, which have gained more notice than I ventured to anticipate, some well-marked and valuable examples of these movements have been communicated to me; but, previous to placing them before the reader, I would refer to several instances long ago observed.

In the reports on cholera drawn up under the superintendence of Mr. Scot, and printed at Madras in 1824, I have found, amongst the cases of the disease described there, the following example:—A man, æt. 42, of middle size and sanguine temperament, who does not seem to have suffered unusually from cramps, died after an illness of about thirty hours; and for an hour after the breathing had ceased, the muscles of the mouth, and those of the feet and legs, were in tremulous motion.

A man, æt. 42, of spare habit, died, after rather more than thirty hours from the commencement of cholera, at Haddington in 1831. The cramps were severe. After death, alarm was excited by a twitching of the left arm, which was drawn across the breast. There was convulsive action of the lips, neck, and pectoral muscles.

In the same journal* whence I have extracted the foregoing will be found a statement of *an alleged premature burial*. A man, it is affirmed, was put into his coffin whilst his body was affected with spasms, and buried within a few hours of his apparent dissolution. Although I quite believe that movements of the kind referred to give no promise whatever of returning life, I can fancy nothing more careless of the prejudices or more revolting to the feelings of persons than early burials in cases where they happen. Let the body be watched until the motions seem fairly to have ceased, and the interment be so long deferred that rumour itself may have no tale to spread.

There can be no doubt, I think, that, owing to the occasional occurrence of these contractions at so late a period after death, the position of a corpse might be altered in the coffin; and it is not hard to suppose some such questions as the following put in the course of a medico-legal inquiry, perhaps occasioned by vague and unfounded rumour as to the body having been buried ere completely dead:—

Could this alteration of posture have been produced by movements happening subsequently to the body being laid in the coffin?

Do you regard such movements as evidences of life?

How long may they commence after dissolution?

Could they have been strong enough to have so altered the position of the limbs?

Have you yourself ever seen such contractions?

Are they peculiar to cholera?

Could the position have been so changed by the effects of "rigor mortis?"

It is stated in the Cholera Gazette for 1832, p. 36, that a medical gentleman of great authority mentioned to Dr. Crichton that he saw convulsions in India, after death by cholera, in the corpses of soldiers, which were so violent that their comrades, "in order to calm the timid, bound the limbs to the bed-frame."†

* Cholera Gazette, 1832.

† We have not to attend to death only, but all its circumstances. As Lord Bacon says, in his *inimitable Essays*, "*Pompa mortis magis terret quam mors ipsa.*" Groans, and convulsions, and a discoloured face, and friends weeping, and blacks and obseques, and the like, show death

An athletic young man died at Belfast in 1832*: the disease did its work in seven hours. Muscular movements were observed in different parts of the body some time after death. Some hours before expiring, he was of "a deep indigo blue." I should not have mentioned this instance but for the circumstance that in some cases of these contractions which have been observed by myself and friends, the body has been unusually livid. The colour of the surface previous to death should receive attention in reference to the motions which happen after it. But I do not know at present that there is any ground for thinking that their occurring after uncommonly intense lividity is more than an accidental event.

Mr. Lawrence mentioned to me that a gentleman, who died in 1832 of rapid cholera, was turned after death completely on the side by a strange and forcible combination of muscular contractions. This case is remarkable from the effect produced.

I wrote to Dr. Sibson respecting a case which was observed many years ago. He says, in reply, "Nearly eighteen years have elapsed since the occurrence of the case of cholera you allude to; and though, from their character, the facts are strongly before me, yet the precise time after death at which the muscular contractions occurred is forgotten." After describing the subject on whom the remarks were made, who was a Newhaven fisherman, singularly strong, muscular, more than six feet high, he remarks—"It might be about an hour after his death that I observed the contractions of the fibres of the pectoral muscles. The whole muscle did not contract at once, but adjoining fibre after fibre quivered. If I touched any fibre at rest, that fibre contracted." Dr. Sibson adds, that the mode in which the contractions progressed from one part of the muscle to another, reminded him of the flitting of the aurora borealis.

In watching contractions of this sort, it is well sometimes to keep the eye perpetually fixed upon a single muscle, —one of the long muscles of an extremity, for example. Now a few hardly

discernible quiverings run along a narrow line; anon they strengthen, spread, and the whole muscle acts, bellies, becomes rigid. and perhaps its contractions are associated with those of other muscles. Presently it is still, and after a pause acts again, going through the same steps as before, but at length becoming more and more languid, its final efforts are seen to die away; or, as it would be more correct to say, its *visible* efforts, for it is probable that the skin veils the faintest of them from our view.

It is not unlikely that many cases happen in which the muscular fibres oscillate, although they act not with sufficient force to strike the eye.

Observers have remarked that some of the motions seen during the muscular contractions are very slow: I am able to say that they are so, and they sometimes remind one of the progression of tardigrade creatures, or the peculiarly gradual way, in which a muscle is seen to act in some cases of paralysis, through dint of long-sustained and energetic efforts of the will.

Let us now pass on to some instances which were furnished by the recent epidemic. Dr. Green, of Bristol, informs me that "muscular contractions, after death, took place to a remarkable extent in a man who died from cholera at Grosvenor Place in this city. The fore-arms were powerfully flexed, and, the hands approximating, gave the attitude of praying to the body. No other parts were affected."

The *semblance* of voluntary motions is one of the most striking occasional features in the history of these post-mortem movements. It is a matter of accident. A few put on the air of such motions,—a few, amidst countless contractions which are not even distantly alike to any of design. In this case, had *one* arm acted only, there would have been nothing very strange in the appearance; but *both* arms happening to act together, and to be influenced in precisely the same manner and degree,—an attitude, reminding us of what we see in living, thinking persons, becomes imitated, if such a phrase be allowable in reference to a phenomenon of absolutely purely physical causation.

Mr. N. B. Ward, of Clapham Rise, has been good enough to send me a remarkable example. It will be seen that the eyes were observed in motion,

terrible." When life is over, it should not amaze us if now and then the affection of survivors blind their judgment utterly, and even cause the senses to err.

* See Cholera Gazette, p. 251.

just as in a case which I detailed in my former paper, and for which I was indebted to Dr. Gull.

Mr. Ward observes—"I regret that I cannot give you very full particulars respecting the case of cholera alluded to by Dr. Gull.* I did not see the patient (a young man of twenty-five) at the commencement of the attack, but was called up early one morning in the beginning of August, and found him moribund. He died in about half an hour, without cramps. In ten minutes (while I was talking to his bereaved mother) I was quickly summoned by the nurse, who told me that my patient was not dead, as she had seen him move. On my return to his bed-side, I found him, as I had left him, without pulsation or respiration. In two or three minutes, however, I was almost as astonished as the nurse had been, at seeing the eyes of my dead patient open and move slowly in a downward direction. This was followed, a minute or two subsequently, by the movement of the right arm (previously lying by his side) across the chest. There was likewise a slight movement of his right leg. The motion of the eyes occurred but once; those of the limbs were repeated to a greater or less degree four or five times, and fully half an hour elapsed before they entirely ceased. These motions were not by such fits and jerks, as are usually the result of spasmodic action."

Mr. Haden observes, in a letter which I have received from him:—"In one case only, on making an incision through the integuments previously to opening the body of a cholera patient two hours after death, did I observe a progressive wave-like movement of the fibres composing the pectoralis major of the left, then of those of that of the right side; and, after these had ceased, of the right platysma myoides, extending from below upwards. The *warmth* of the body, also, at this time, was *sensibly greater* than it had been *during life*, and than that of a cholera patient in the next room."

Looking to the most remarkable cases of these motions, where they exhibit great varieties and degrees of muscular action, often existing together, I cannot remember any observation, which I have made upon disease or in course of ex-

periment, which related to so singular a *series* of contractions; but *some* of the instances certainly reminded me, as to *form* of action, of what has been seen before, both in pathological and physiological investigation.

The way in which *portions* of the long muscles occasionally contract,—a way noticed by John Hunter and Professor Müller as inimitable by any effort of the will whatever,—is sometimes beheld in certain of these instances very much as it is seen in disease.

It is here unnecessary to go into this question at any length; but let the following passage, which occurs in the narration of a case of nervous disease, be read attentively:—"She began to perceive an actual vibration or starting up of *certain portions* of the flexor muscles of the fore-arm, and of the deltoid, on the left side; not so, however, as to move the arm or hand."* By omitting certain words, and altering the sentence slightly, an account might be given which would pass readily enough for *some* of those forms of post-mortem contraction which it has been my endeavour to describe. A fact was noticed here which, of course, could never be seen in any movements subsequent to life. The muscular vibrations were made to cease by the will acting on the parts they occupied,—acting with a stronger force than they, and putting on the stretch the quivering fibres.

I would now beg particular attention to a very interesting and valuable case, in which not only were muscular contractions of a spontaneous kind observed after death, but movements of a like appearance could be excited readily by mechanical stimulus of the irritable fibres. It was observed with great care by Mr. Helps, at St. Bartholomew's Hospital; and the notes of it were given by him to Mr. Paget, who has much obliged me by permitting their insertion amongst the illustrations of this essay.

"Patrick Ryan, æt. 29, admitted into the hospital August 23rd, 1849, half-past 12, A.M.

He was unable to give any account of himself, or even tell his name; and his wife left him immediately he was admitted into the hospital. After hav-

* It was at the obliging suggestion of this gentleman that I made inquiry of Mr. Ward.

* On a Case of Nervous Affection, cured by Pressure of the Carotids; with some Physiological Remarks. By C. H. Parry, M.D., F.R.S. See Philosophical Transactions, 1811.

ing a bath and a mustard poultice, which produced no reaction and afforded him no relief, he sank, living only one hour after admission. From subsequent inquiry it appears that he was attacked with cholera five hours before admission, having previously been perfectly well. He resided in Gray's Inn Lane, and was a particularly well developed muscular man. After he had ceased to breathe, the fingers continually twitched and trembled, and the muscles of the arm acted forcibly on even slight irritation. When the arm was straightened, and *the biceps struck with the side of the hand*, the fore-arm would be bent suddenly, the hands springing forcibly upwards, and a weal was left where the blow was struck, which subsided again in a few seconds. *Always on irritation*, and frequently without, the extensors and flexors would contract, extending the hand fully or doubling the fist; the fibres of the muscles were continually in rhythmical motion, so that when the fingers were pressed on the belly of the biceps a sensation as of the pulsation of an artery was plainly felt. The contraction of the biceps was so strong occasionally that its tendon would stand out from the bend of the elbow, almost permitting the finger to be passed behind it. The longer the muscles were allowed to remain without irritation the more powerfully did they contract when excited. The pectoralis major, biceps, and triceps muscles, acted most decidedly. In three-quarters of an hour after death the body was removed. Until that time there was no decrease of heat on the surface."

This striking example is so plainly detailed that it carries with it, for the most part, its own comment, and I will avoid diffuseness in the remarks that I shall venture to make. The points of interest in this short narrative are many; seldom, indeed, are so many to be found in so small a compass. The muscularity of the subject; the absence of the premonitory stage, as it is called, and which is wanting far more frequently than some authors and observers are ready to allow; the rapidity of the death; the extremely irritable state of the muscular fibres, as evidenced, to go no farther, by the continual quivering felt by the hand when laid upon the skin; the excitement of contraction by means of blows; the

weal which followed them, and its quick vanishing; the form, strength, extent, and variety of the motions; the apparently increased renovation of irritability on the muscles being left untouched for a given period; and the allusion made to the state of the temperature, are all matters worthy more or less contemplation. The *sex* of the party seems to call for a passing notice. Females are, as would be anticipated on all sides, subject to these contractions as well as males. The very last case which occurred in the Westminster Hospital (the movements were very transient, and affected the lower extremities) was that of a woman in early pregnancy, who, for a short time before her attack, had slept in the same bed with a child that was dying of cholera; but, so far as my own inquiry goes,—which, I confess most readily, is far from complete,—males are the most subject to them, and especially if the more lasting and violent kinds be considered; or, to speak strictly, more instances have, up to this time, been observed in men.

The absence of the premonitory stage and the rapidity of the death are important in reference to what was seen after the cessation of the breathing; for, though swiftness of dissolution cannot be held, I think, to explain by itself post-mortem contractions, yet it may be regarded, if not altogether as *necessary* to, at least as a main auxiliary in, remotely causing their occurrence. But the *kind* of death, as well as its *suddenness*, must be well thought about. Asphyxiated persons come to an end more suddenly than the victims of cholera; the apoplectic die frequently far more swiftly; some perish from the heart's action failing, almost as quickly as the eye can wink; and yet no movements resembling these (I speak not merely of a few slight and transient quiverings, but of the more manifest and enduring actions) have, so far as my knowledge goes, been observed hitherto in such cases.

The persistent quivering of the muscular fibres, which was felt by Mr Helps on placing his hand upon the corpse, is perhaps most to be likened, in form of motion, to what occurs in the muscles of animals which have been destroyed by quick and profuse hæmorrhage. I have often seen motions of this sort, but have never yet observed

them with the attention they deserve.*

In animals which have been drowned, or destroyed by poison, or killed quickly by some means or other, quiverings of the muscles have been frequently seen. I have beheld them after destroying an animal *rapidly* by chloroform; and this circumstance must be viewed in connection with the indubitable fact that chloroform very much impairs the irritability of the muscular fibres.

Sir Benjamin Brodie observed "constant and powerful contraction of the muscles of the trunk and extremities, whilst experimenting with artificial respiration on decapitated animals;" he remarked also the most violent actions when experimenting similarly on an animal which he had poisoned with injection of tobacco. Inasmuch as artificial respiration was maintained in these cases, these motions occurred under different circumstances to those which happened where there is no breathing; but there were other motions, though not so forcible, which Sir Benjamin remarked in his latter case, "*half an hour after artificial respiration was discontinued*," and which became by degrees less strong and frequent.† These, though there be points of difference even so far as mere form is concerned, when they are viewed in relation to those which follow cholera, are manifestly well worthy of observation, in reference to the whole question of post-mortem contraction; and in this light they were referred to by Dr. Sibson on the first part of this essay being read before the Westminster Medical Society; and Sir Benjamin Brodie has since had the goodness to refer me to them on my inquiring whether he had ever seen phenomena which touched in any way on the post-mortem contractions after death by cholera.

I have, whilst watching insects from which I had removed the head, noticed motions of the legs which lasted for a

protracted time; but I have not seen the same contractions in the like insects on volition and consciousness being suspended by chloroform, and for the reason, as I suppose, that the motor force and muscular irritability are so extremely affected by this potent agent.

No doubt, all muscular actions which take place after the cessation of the respiration and circulation are of moment in regard to our difficult inquiry; but at present, after considering those with which I am conversant, the question is to me still most perplexing—*Why do such powerful and enduring contractions happen after death by cholera, and yet not happen in some other kinds of dissolution which are far more rapid; some of them being, indeed, quite sudden?*

It was this query which led me to use reserve when I spoke of the cause of them in the first part of this paper, and to avoid propounding an hypothesis which would be unable to bear scrutiny.

That the muscles maintain their irritability is clear from the facts; but the riddle is,—what causes its manifestation? If muscles acted from mere irritability, we should find surely muscles acting at times wherein we now see them in perfect rest. There is some stimulus or other, though we know it not, which irritates the muscles after death from cholera. Is it possible that changes in the blood go on, and stimulate their fibres, or the minute branches of the motor nerves which ramify therein? Further inquiry may one day solve what is complex now, by finding out circumstances necessary to an explanation; but "the problem is too difficult, while the data are so few and the unknown things so many."*

Still, admitting to the full the obscurity of the subject, it must be granted that many facts have been observed of no little interest, and that the minds of inquirers are, through reflection on them, likely to be made ready for profitable investigation. The facts are not altogether valueless because they cannot be satisfactorily explained. The mere knowledge of these marked and unusual manifestations of muscular irritability—these partial signs of remaining vitality in a body which, *practically*

* These movements certainly merit especial investigation in reference to our subject. This struck me long since; but I have to thank Dr. Babington and Mr. Paget for calling my attention to them.

† See the Croonian Lecture on some Physiological Researches respecting the Influence of the Brain on the Action of the Heart, and on the Generation of Animal Heat; and Experiments and Observations on the Different Modes in which Death is Produced by certain Vegetable Poisons; in the Philosophical Transactions for 1811.

* From a letter of Mr. Paget, Dec. 26, 1849.

speaking, is *truly dead*, is surely not to be despised as worthless. Had Nysten beheld them, they would doubtless have attracted the marked attention of this distinguished man.

And, though their cause be undiscovered, their course wayward, their form various, and their very event uncertain, there are *points* about them which are fairly comparable to those which we have learnt from other muscular phenomena; and there is no doubt but that a little inquiry would detect some further resemblance.

The observation of Mr. Helps, in the case he has described, that rest had the effect of renovating the irritability, becomes of interest when placed beside the fact, that a like circumstance is (as every one knows) commonly perceived by experimenters when galvanizing the muscles of the frog. They are exhausted by contraction, and draw energy from repose.

His remarks, moreover, on the mechanical irritation of the muscles, cannot be abruptly dismissed; and especially as they admit of being compared with those which Dr. Dowler made some time past, chiefly on bodies dead from yellow fever.

But apparently unexcited contractions must not be blended and compared with those obtained by Dr. Dowler's experiments, of which I propose to give a brief notice. They were performed by striking the muscle with the hand, a stick, &c., and illustrate a mode of proceeding which Dr. Dowler styles the method of "percussion," and which, in his opinion, is the only perfect method of artificially exciting muscular contraction.

The observations, some of which are of great interest, were made principally on subjects who died of yellow fever, which is said to present more frequent and enduring cases of contractility than other fevers.

The following observation was made, neither on any kind of fever, nor cholera. In the body of a German, who died after fracture of the leg, whereto gangrene succeeded, flexion was produced by a single blow.

In one case of yellow fever, contractions of the muscles were excited *fourteen* hours after death. Flexion, extension, and other movements of the limbs, were again and again excited by blows; so were knots in the muscles also.

Violent and repeated percussion entirely destroyed contractility.

The extinguishing of the irritability of one muscle did not (as might have been expected) affect that of another.

Irritability was renovated by rest, just as Mr. Helps found it to be, lately, after death by cholera.

Contractions were caused in limbs separated from the trunk by experiments, which, let me say, considering the phenomena otherwise elicited, do not appear to have been necessary to show that the contractions were independent of the nervous centres.

In many cases there was an *extraordinary elevation* of temperature*, as ascertained by the thermometer, but such great degree of heat, according to Dr. Dowler, has no necessary connection with facility of provoking the muscles to action.

Sometimes post-mortem rigidity supervened during the paroxysm of contraction; a result which reminded me of an observation of M. Sommer, who has said that tetanic cramp in the muscles of the jaw passed immediately into rigor mortis.

These and other observations resulted not from a few, but a great number of experiments. It is to be regretted that the kind of diseases after which some of them were made is not explicitly stated.

At page 33 of his researches, we find Dr. Dowler founding upon *two* cases the following question—*Does muscular contraction after death ever show itself unconnected with any appreciable cause or excitant?* And looking at the way in which the previous cases are introduced, being *apparently* related expressly for the purpose of illustrating the effects of percussion, and also considering the whole context, I rather think, although the author sometimes says "contractions took place," without specifying that they happened from irritation, that in all the cases mentioned by him, *except the two* just referred to, the movements were produced by mechanical force. They are classed with those which were so. But let the reader judge for himself. One of the two instances was contributed by cholera. A young lady died of this disease at Virginia, and

* It is my intention to draw notice, in another communication, to the state of the temperature after death in cholera, and to refer in detail to the case that occurred at Bristol, which has been kindly communicated to me by Dr. Green.

about *three hours* after death there "was a brisk twitching of the fingers, somewhat like *subsultus tendinum*, being chiefly in the flexor muscles, which latter had suffered before death both from cramps and strong flexions."*

The experiments of Dr. Dowler should be viewed in their truelight. *A muscle contracting of itself (apparently) is not surely like another which acts because we irritate it.* The results which he obtained are to be considered in relation to the proofs which Nysten obtained by means of galvanism, of the irritability of the muscles after death, and its varying degrees.†

The forces employed by the experimenters were different, but they both palpably excited the muscle to contraction. Dr. Dowler has shown that percussion can produce movements where they would not have occurred without this or some other stimulus. Mr. Helps proved that it will readily produce them where other movements are spontaneously taking place. I think it can scarcely be doubted that it would also, if trial had been made, have occasioned contraction in some of the dead from cholera, who, as it was, presented no signs of motion.

The muscles may be more irritable, and mechanical violence more powerful to stimulate, where post-mortem movements happen, than where they do not; but the question of irritability, and that of its unchecked manifestation, must be kept apart. The researches of Nysten well proved its presence; but in cholera it is evidenced without a stimulus being applied of any kind.

The convulsions which we may excite by irritating the spinal marrow of a decapitated animal are not to be con-

founded with others which take place in the absence of all interference, and of which we know not the cause.

I wish not to give post-mortem contractions a new air of mystery: they are already sufficiently obscure, and need not unintelligible language.

They amaze us because they are strange, or because, perhaps, we have not yet sufficiently compared them with other forms of post-mortem contraction.

We must collect and compare phenomena; the endeavour to trace analogies is scarcely ever fruitless. Deaths by disease and poison are different things, but they have much in common; in common they are protracted or sudden, most seriously affect the blood and nervous system, and leave muscular contractility in states most opposite.

It is the state of the blood at the time of dissolution which, no doubt, accounts for many alterations in the condition of the muscles during and after dying; and this observation may be rested on the fact, that by varying in experiment forms of death, we may also change the measure of irritability which will remain afterwards.

Two things are principally to be considered in reference to post-mortem irritability,—*suddenness of death*, and the *condition of the circulation at the time of dying*.

The drowned person perishes more quickly than another destroyed by cholera; yet the corpse of the latter, though untouched, unstimulated, shall exhibit strong and remarkable contractions, whilst that of the former will manifest none at all.

In animals nearly drowned, and which recover eventually, Sir Benjamin Brodie remarks, that there "take place spasmodic contractions of the voluntary muscles, and these are the forerunners of complete resuscitation."* But before this happens, the blood has become more or less oxygenated by the respiratory efforts which precede these movements. They must, therefore, be distinguished from those which happen where there is no breathing. In death by convulsion I have never seen any spasmodic actions afterwards.

I have said that subsequent to asphyxia in animals, there are muscular quiverings seen, but in the instance in

* See Experimental Researches on the Post-mortem Contractility of the Muscles, with observations on the reflex theory. By Bennet Dowler, M.D. New York. 1846. See also a notice of this contribution in the British and Foreign Medical Review for 1847, and one of Mr. Paget's Reports on Physiology in the same work.

† See Recherches de Physiologie et de Chimie Pathologiques, pour faire suite à celles de Bichat sur la vie et la mort. Par P. H. Nysten. A Paris, 1811. The title of this work should be read together with the following passage, which occurs in the preface—"En annonçant les recherches que je publie aujourd'hui comme une suite à celles de ce physiologiste sur la vie et la mort, je n'ai pas la folle prétention de faire placer mon nom à côté du sien; je prévois trop les résultats fâcheux de la comparaison de ses ouvrages avec les miens pour concevoir jamais la pensée de la provoquer." Such was the modesty of this observing philosopher! So tasteful was the tribute which he paid to genius!

* See Lectures illustrative of various subjects in Pathology and Surgery, p. 97.

which I have noted them, the fibres have been exposed to the air, which may perhaps act as a stimulus to some extent.

We must not be satisfied with proofs of post-mortem irritability remaining; we require observations on its *degrees*; and if we use galvanism in an *excessive* measure, in order to test it, we shall be able to arrive at no satisfactory results. In the dead as in the living, we must first resort to the lowest force which will produce contraction; proceeding on the principle which Dr. Marshall Hall has followed in his inquiry into the irritability of paralytic limbs. What is the condition of the muscular irritability in cases of unusually early decomposition, in such a case, for instance, as that recorded by Dr. Taylor, in a late number of the *MEDICAL GAZETTE*?

In animals that die suddenly from loss of blood, the muscular fibres are very irritable,—so they are in cholera; they contract of themselves,—so they do in cholera. There is, then, a certain degree of similarity between the cases. Probably so high an amount of irritability remains in cholera, partly from the circumstance that blood charged heavily with carbonic acid does not freely circulate through the muscular fibres in that disease. Still, *why* it should be evidenced in so explicit and singular a manner, the like whereof has not yet been noticed after any other *disease* in this country, remains in my mind a hard problem.

It would seem necessary to distinguish between those cases of post-mortem contraction in which the *muscular fibre is and is not exposed*.

Referring to what is already ascertained of the quiverings of the muscular fibre after death in the lower animals, I can hardly doubt that they would be seen *occasionally* in man himself, were post-examinations not deferred, and, as a general rule, very properly, until the time they are.

Perhaps slight movements would be discovered on uncovering the muscles which would otherwise be invisible; or perhaps the air would be found influential in exciting them.

I am not aware that any muscular oscillations or twitches were seen in the bodies of those who, after being hung for murder, used formerly to be given up for dissection. I opened the body of a man at Chelmsford, who was hung since the period I refer to, about an

hour and a half after his death and did not observe any movement whatever of the muscular fibres.

Mr. Paget observes to me in a letter, speaking of a post-mortem inquiry, "the muscles twitched when cut or pricked three or four hours after death. I should think such an event very rarely happens." He adds—"in the body of one hanged the muscles did not show any irritability an hour after death."

It is quite clear, from the statement of this able and experienced pathologist, that observations showing post-mortem contractility as *self-manifested*, if I may use the expression, are much to be desired; and I have no doubt the reader will peruse with interest the following statement, which Mr. Haden has communicated to me:—"In 1839, at Grenoble, I once saw the same undulatory thrill* in the body of a French trooper, whose thumb I had amputated for a gun-shot injury, and who died of tetanus. On that occasion, the pectoral, abdominal, latissimus dorsi, platysma myoides, and all the flat superficial muscles, were affected."

There is nothing which shows better than chloroform the influence of certain conditions of the blood on the muscular fibre. I have seen the muscles twitch in a guinea-pig which I destroyed by means of it; and in this instance I also found the muscles were responsive to the influence of galvanism. But the animal was killed *very quickly*, and in testing the irritability I used too high a force. Dr. Tyler Smith, from some experiments upon the frog, which he has lately described, concluded that the irritability was extraordinarily impaired. Dr. Marshall Hall has come to a like inference. The other day I killed two frogs, one by chloroform, the other by decapitation: the galvanic force, which acted most readily upon the latter, did not influence the former in the least. In the course of last summer I found the irritability of the muscular fibre of the dragon-fly much impaired by this agent.

Nysten has pointed out not only the various effects of unlike gases upon the muscular fibre, but the difference between the results derived thereto from *slow* and *gradual* asphyxia.

In some kinds of asphyxia the death is so *rapid* that the irritability of the

* Alluding to remarks on cholera.

muscular fibre is not nearly destroyed, although it be always, most likely, impaired somewhat; were the process slower, the muscular tissue would, there is every reason to believe, be more affected, and its function more impaired. But the whole inquiry needs a closer and wider investigation.

Had not the cholera taken its departure, for which, in common with every one, I feel most thankful, I would, had health been spared me, have made, by means of galvanism, some few simple observations on the muscles after death. May the opportunity return not! "Let me be sick myself," says Sir Thomas Browne, "if sometimes the malady of my patient be not a disease unto me;"* and surely it was enough to discomfort any one to see person after person brought into a hospital only to die,—to see death baffling physic every where. Much, too much, that was published in 1848 was, in plain truth, but a melancholy echo of the "Cholera Gazette" of 1832, and the "Madras Reports" of an earlier period. There was the same narrative of fearful symptoms, the same catalogue of supposed "remedies," the same record of a tremendous mortality. To one thing only can we revert with pleasure,—I mean the conduct of so many in the profession during the raging of the epidemic, and that of those especially who devoted themselves exclusively to the sufferers from it. Not theirs it was to fly infected places, and exchange a monotonous scene of desolation for one of bright variety and joy; but theirs, amidst a poisonous atmosphere, and sometimes with their own strength failing, to abide with constancy by the stricken and the dying: and, when powerless as physicians, still to act as men.

Westminster Hospital,
Jan. 18th, 1850.

CHOLERA IN A CHIMPANZEE.

A CHIMPANZEE in the Zoological Gardens at Antwerp was seized with all the symptoms of cholera in August last. He had cramps, vomiting, rice-water purging, coldness, and small pulse. He was treated by sinapisms and opiates, and recovered at the end of three days.—*La Presse Médicale*. X

* Religio Medici.

CASE OF ELEPHANTIASIS SCROTI. COMMUNICATED BY DR. CHILD.

In the summer of 1849, a man from the eastern part of the Delta, suffering from enormous enlargement of the scrotum, was received into the Pascha's Military Hospital at Alexandria, under the care of Alex. Farquhar, Esq. The tumor had begun four years previously; before which time, however, he had twice undergone an operation for the radical cure of hydrocele. The patient's age was 28, and his general conformation was robust. The appearance of the tumor will be at once understood by referring to the accompanying woodcut, taken from a daguerreotype. It was pyriform in shape, and of the ordinary colour of the scrotum. It reached about half-way down the legs, and almost entirely prevented him from walking. When the patient was seated, with the tumor resting on a couch, a line drawn round it from one side of the pubis to the other measured four feet three inches; and, from its attachment at the symphysis pubis round to the anus, it measured three feet three inches: its circumference at its greatest diameter was three feet eight inches. The tumor was firm, but of variable consistence throughout.

Mr. Farquhar proposed the removal of the tumor; to which the man, worn out with its weight and other inconveniences, readily consented. With reference to the operation, it may be mentioned that it lasted twenty-five minutes. The first incisions through the integuments were attended with bleeding from numerous small arteries and veins, none of which required tying. The substance of the tumor itself did not contain any vessels of large size. The penis and the testes were carefully guarded from injury. It was found that hydrocele existed on both sides; each tunica vaginalis containing about two pints of serous fluid.

Previous to the operation Mr. Farquhar determined, in consultation with Bedan Bey and his other colleagues, to administer chloroform. Accordingly, it was given freely during the operation, with the effect of producing total insensibility to the pain. On beginning to

dress the wound, however, it was found necessary to administer stimulants abundantly, on account of the prostration of the patient; and, although these

were assiduously repeated after his removal to bed, he never rallied, and he finally sank four hours after the operation.



The chief substance of the tumor was found to be composed of the hypertrophied integuments and condensed cellular tissue; it weighed seventy pounds, after the fluid of the hydroceles had drained from it.

A post-mortem inspection was made three hours after death. The chief morbid appearances were a small cyst near the lower end of the œsophagus containing about an ounce of dark brown grumous fluid, and an abundance of yellow, peculiar-looking fat pervading the cellular tissue generally, and likewise attached in masses to many of the abdominal viscera. It was found also in the pelvis and substance of the kidneys, and abundantly in the anterior mediastinum. The heart was healthy; and it is to be remarked that its texture was unusually firm.

With reference to the chloroform question, it will be asked, had the chloro-

form any influence in this case in bringing about the fatal prostration of the patient? This is a point which will probably be decided by each person in accordance with the views which previous experience or reading may have led him to entertain. Many, no doubt, will look upon it as one case more added to the list of those showing the pernicious effects of chloroform; another class, probably the majority, will consider that nothing is here proved against the use of that remedy. At all events, this is not the first instance where a patient has sunk from the shock of this operation, and that at a time when chloroform was unknown. The operator's own conviction is that the effect of the chloroform was most injurious.

OBSERVATIONS ON TRUSSES.

By THOMAS PRIDGIN TEALE, F.L.S.
F.R.C.S.

Surgeon to the Leeds General Infirmary.

AMIDST the various devices, patented and non-patented, which have from time to time been contrived for the relief of reducible hernia, the surgeon, who is only occasionally called upon to minister to hernial patients, feels bewildered by the number and diversity of the objects presented to his choice, and is unable to determine their relative merits. Even the hospital surgeon may occasionally be found whose mind is not fully settled on this subject.

Without presuming to expect that any observations of mine can remove the difficulty, but in the hope that they may in some degree lessen it, I venture to submit to the profession a description of the trusses which both in hospital and in private practice I have found to be the most valuable.

It has been for some time my endeavour to select, from the hernial bandages hitherto employed, such portions of them as appeared the most beneficial, and to combine these elements so as to constitute a truss capable of affording support to the viscera, and comfort and security to the wearer.

The trusses which it is my present object to describe, consist of the ordinary *elastic steel girdle*, a *hard pad* specially adapted in size and form to the part requiring support in the different species of hernia, and a *spiral spring* acting perpendicularly upon the pad.

Elastic girdles of steel, recommended in 1605 by Matthias Mayor, were afterwards extensively used by Blegny, and are now in general use. A spiral spring acting directly upon the pad was occasionally employed by Blegny, and has since been adopted in the construction of "Coles's patent truss." Pads of hard material, as wood and iron, were employed as early as the thirteenth century, and after long disuse have recently been brought into operation by Drs. Hood and Chase, in America. The material employed by these surgeons was boxwood. In reporting upon Dr. Chase's truss, the Philadelphia Com-

mittee state that it is "worn with so much comfort that patients generally relinquish it unwillingly, and sometimes absolutely refuse so to do, even when pronounced cured by the surgeon." For many years I have invariably used trusses, with ivory pads, in the treatment of inguinal hernia in infants, and of late have used *hard pads* of ivory or wood, with scarcely any exception, in the treatment of reducible hernia both of infants and adults. By the use of the hard pad the most perfect and definite support is given to the weak part of the abdominal wall; but in its use care must be taken that the form and size of the pad, and the amount of pressure exercised by it, are judiciously adapted to the particular case.

The trusses to be described in this paper have been constructed for me by Mr. Thomas Eagland, of Bond Street, Leeds. It affords me much pleasure to have this opportunity of paying my tribute of respect to him for the artistic skill and the science which he has most successfully brought to bear in their construction.

The oblique inguinal truss.—The oblique inguinal truss consists of an elastic girdle of steel, to which is adapted a hard pad of oblongo-oval form, acted upon by a spiral spring.

By means of the elastic steel girdle the truss maintains a firm and steady seat upon the pelvis; by the hard pad of oblongo-oval form a firm support is given to the internal ring and inguinal canal, the external ring being left free; and, by the spiral spring, the pressure of the pad is directed perpendicularly upon the part requiring support, during the varied movements of the body. Through the medium of the spiral also, the *degree* of pressure exercised by the pad admits of being modified by tightening or slackening the end of the girdle-strap, which is fixed to the button on the pad.

The *girdle* is formed of a strip of elastic steel, rather more than half an inch in breadth, and of sufficient length to extend from the pad across the back of the pelvis as far as the haunch of the opposite side, from which point the girdle is prolonged by a leather belt across the lower and front part of the abdomen to be fixed to a button on the pad.

FIG. 1.

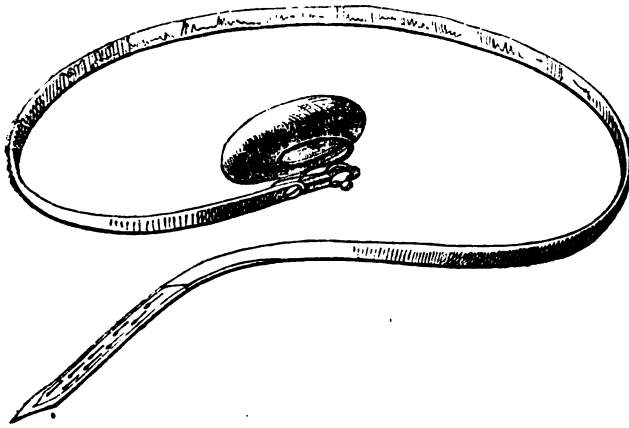
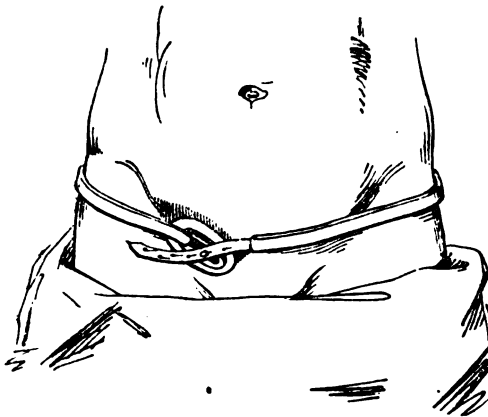


FIG. 2.



Although elastic girdles of steel are now in general use, it is rare to find one, in the various offices of surgical mechanicians, that is not faulty in construction; or, in other words, that secures to the wearer the full amount of benefit that it is capable of affording. The chief error consists in the portion of the girdle which is applied to the back part of the pelvis being made of a *straight* strip of metal bent towards the circular form, and representing a short *cylinder*. The only bearing which such a girdle exerts upon the back of the pelvis is by its lower border; whereas, if the girdle were constructed so as to represent a transverse section of a cone, it would adapt itself to the obliquity of the back of the pelvis, and

would thereby secure a bearing upon this part by the whole of its internal flat surface. This advantage is secured, as I have elsewhere* shown at considerable length, by the form given to the steel plate of which the girdle is formed. Instead of being a *straight* strip of metal, the portion which is applied to the back of the pelvis should be cut in the form of a curve, the convexity of which is directed downwards (see fig. 3, *a* to *b*). When such a piece of steel is bent towards the circular form it represents a section of a cone, the upper border of which is shorter than the lower, and the flat surface has an obliquity corre-

* Pract.
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his, by

sponding to the obliquity of the back of the pelvis. The back part of the girdle being thus constructed, the truss is enabled to maintain a firm seat upon the pelvis; but, in order that it may exert a direct bearing upon the inguinal canal, it is necessary that the anterior portion of the steel girdle, which extends from the haunch to the pad,

should describe a moderate curve with the convexity upwards (see fig. 3, *b* to *c*): By bending this portion of the elastic girdle towards the circular form, its internal or applied surface acquires an obliquity facing upwards and backwards, and in this direction it exercises its pressure upon the pad.

FIG. 3.



This form of elastic girdle was adopted by the late Mr. Eagland, of Leeds, and has been used by his sons, Mr. Thomas Eagland, of Leeds, and Mr. Edwin H. Eagland, of London. I have seen trusses similarly constructed by other instrument makers; but in too many instances, even in the present day, a straight strip of metal is the form of steel girdle employed.

The steel girdle is covered with leather, silk, or calico, and is slightly wadded on its internal surface.

The *pad*, for ordinary cases of oblique inguinal hernia, should be of an oblong-oval form, two and a half inches in length, and one inch and three-quarters in breadth. Ivory is the best material, being susceptible of a high polish, and also a good conductor of heat, on which account it is cool to the wearer. In hospital practice, where the cost of the instrument is an object, a pad of box-wood steeped in linseed-oil may be substituted for it, or a boss of thin metal covered with a layer of leather. In young subjects, whose muscles are powerful, the pad should be of smaller size and greater prominence, for in them a more concentrated pressure is required. In old persons, whose muscles and aponeuroses are feeble, the pad should be larger and flatter. If the hernia has considerably dilated the inguinal canal, a pad of greater breadth and less convexity is to be used. When the posterior wall of the inguinal canal has been so much encroached upon, in consequence of the large size and long continuance of the protrusion, that the hernia is apparently direct, the form of pad hereafter to be described as applicable to direct inguinal hernia should be

employed. The pad must be hollowed on its external surface, for the double purpose of giving it lightness and of allowing a recess for lodging the spiral spring when pressed home.

The *spiral-spring*, placed between the anterior extremity of the steel girdle and the pad, is made of steel wire thickly electro-plated; or, where the cost of the instrument is an object, varnished. The form of the spiral in the inguinal truss is oval, adapted to the form of the pad. The terminal coil of the spiral, which is attached to the pad, is received into a narrow groove prepared for it in the concave surface of the pad. This mode of attachment between the spiral and the pad renders any other fastening unnecessary. A uniform pressure throughout the whole extent of the pad is thus obtained; and the spiral, acting as a universal joint, allows the girdle to adapt itself to the varying movements of the body without disturbing the pad.

The measure for this truss is taken by passing a string from the internal ring around the pelvis to the same point, care being taken that the course of the string is directed on each side along the depression between the trochanter and the crest of the ilium. The mechanist, in constructing the truss, allows one inch of additional length to compensate for the space occupied by the wadding. When a double truss is required, in addition to measuring the circuit of the pelvis it is necessary to note the distance from the internal ring on one side to that on the opposite.

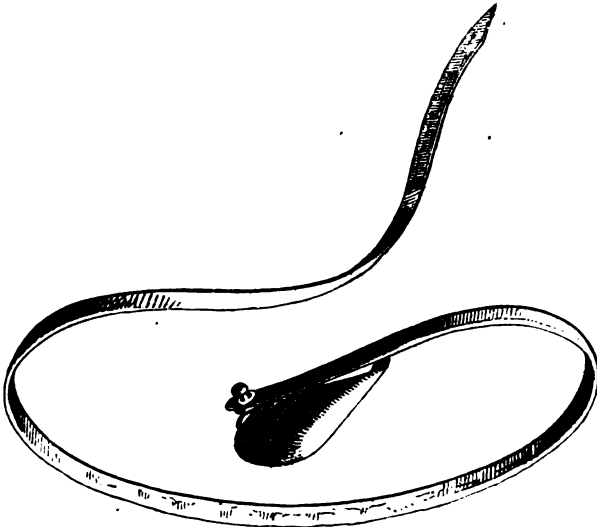
The direct inguinal truss.—For the support of a direct inguinal hernia, or of an oblique inguinal hernia, which from

long continuance has simulated the direct, it is necessary that the pressure of the truss should be chiefly exercised over the external ring. For this purpose a truss may be employed similar to the former, but with an egg-shaped pad, the larger extremity of which lies towards the pubes. In ordinary cases

the pad may be two inches and a half in length, and one inch and a half in breadth towards its pubic end. The degree of prominence of the pad should be adapted to the particular case.

The spiral in this truss is circular, and is attached so as to act chiefly upon the pubic end of the pad.

FIG. 4.



The femoral truss.—The femoral truss, like the former trusses, consists of an elastic girdle of steel, and a hard pad of special form, acted upon by a spiral spring.

FIG. 5.



The elastic steel girdle is similar to that described for the oblique inguinal truss, except that its anterior portion, which extends from the haunch to the pad, should sweep in a course somewhat more descending. This portion of the steel girdle is usually about one inch shorter than in the inguinal trusses.

The pad of ivory, boxwood, or thin metal covered with leather, is of a triangular form, the upper border corresponding in its direction with Poupart's ligament, and the pubic border being parallel with the femoral vessels. The size of the pad which has been found best adapted to the generality of cases is one inch and one-third in the vertical direction. The greatest prominence of the pad should be near its upper and pubic angle, so that its pressure may be chiefly exercised upon the pubic compartment of the femoral sheath, immediately below Poupart's ligament. The proper form is given to the pad by slightly bevelling the upper and pubic edges, and by more freely bevelling the lower or iliac edge, the angles and apex formed by the union of these planes being freely rounded off. The pad should be hollowed on its external surface. The spiral spring, which in this truss is of a circular form, is attached towards the upper and pubic end of the pad, so as to act more especially on its most prominent part.

A pad thus constructed gently closes the external aperture, namely, the saphenous opening, but its chief pressure is directed to the pubic side of the femoral vein. The large vessels are thus subjected to as moderate a degree of pressure as is consistent with the support of the hernia, and the pressure is concentrated upon the part which more especially requires support. It is of the utmost importance that the pad of the femoral truss should be of *small* size. If its dimensions materially ex-

ceed those stated above, the pad is constantly liable to displacement from the action of the psoas and iliacus muscles on one side, and the pectineus on the other.

FIG. 6.

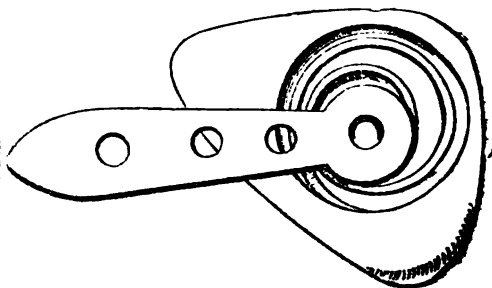
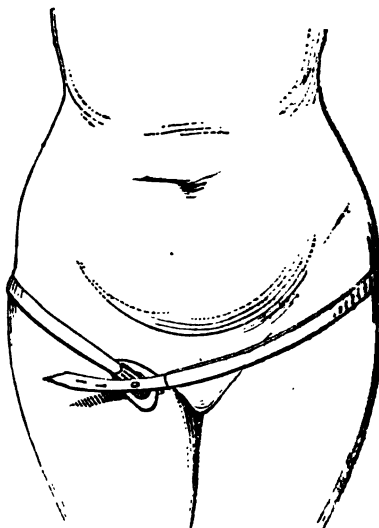


FIG. 7.



The hard pad and spiral spring are equally applicable to the umbilical and other trusses.

OIL OF TURPENTINE IN INTERMITTENT FEVER. BY DR. N. WARD, BURLINGTON, VERMONT.

WHILE in Ceylon, I treated many cases of fever and ague most satisfactorily, with a mixture of oil of turpentine and castor-oil, in the proportion of one to two drachms of the former to one ounce of the latter, and administered in a mildly cathartic dose at the beginning of every cold stage. Where

relief was not promptly obtained, there were generally present, signs of biliary derangement, indicating the moderate use of calomel, or calomel and ipecac., after which a dose or two of the mixture usually completed the cure. This was used in cases of long standing, as well as in recent ones; and in one case of enlarged spleen with good effect.—*American Journal of the Medical Sciences.*

MEDICAL GAZETTE.

FRIDAY, FEBRUARY 1, 1850.

It is a fact which the public will hardly credit, but which is nevertheless indisputable, that there is no settled rule among professional men for the confinement of persons alleged to be lunatics. The present state of our law on this subject has been very broadly put by Lord Ashley, one of the Commissioners of Lunacy, in a letter addressed to the Lord Chancellor.*

"Upon this point it is of vital importance that no mistake or misconception should exist, and that every medical man who may be applied to for advice on the subject of lunacy, and every relative and friend of any lunatic, as well as every magistrate and parish officer (each of whom may be called upon to act in cases of this sort), should know and be well assured that, according to law, *any person of unsound mind*, whether he be pronounced dangerous or not, may legally and properly be placed in a county asylum, lunatic hospital, or licensed house, on the authority of the preliminary order and certificates prescribed by the Acts 8 and 9 Vict. c. 100, or c. 126 (as the case may be).

"The order and certificates thus obtained show (or *ought* to show?) that the person mentioned therein is either a lunatic, an idiot, or a person of unsound mind, and a proper person to be confined, and fully justify all parties in the matter; and they enable the proprietor or superintendent of any hospital or licensed house to plead them in defence to any action, and are, in the words of the statute, a justification for 'taking, confining, detaining, or retaking the patient (*see* 8 and 9 Vict., c. 100, s. 99)."

Lord Ashley is particularly desirous of showing that proof of a tendency to

dangerous conduct on the part of a lunatic has nothing at all to do with the matter; and in this we believe he is technically correct, provided the person be really "a lunatic, an idiot, or person of unsound mind;" although it must be borne in mind by all who sign certificates, that the reasons for considering the person to be a lunatic, must be stated on the certificate.

"The object of these Acts is not, as your Lordship is aware, so much to confine lunatics, as to restore to a healthy state of mind such of them as are curable, and to afford comfort and protection to the rest. Amongst the many persons confined as being lunatics or of unsound mind, those who are manifestly dangerous, that is to say, those who, by some overt act, have already proved themselves to be dangerous, are comparatively few in number: the far more numerous class consisting of—1st. Those who are sent into lunatic establishments for the purpose of treatment, with a view to the alleviation and cure of their malady. 2dly. Those who, from disease of mind, are incapable of self-government, and who therefore require, at certain periods (or perhaps generally), the most careful supervision and control. And 3dly. Those who are incapable of taking care of themselves or their affairs, and are likely, therefore, to sustain serious injury if left at large and unprotected."

"If all lunatics and persons of unsound mind, except such as had previously manifested a dangerous tendency, were to be excluded from the care and treatment provided in lunatic establishments, sanctioned by law, for the benefit of the whole class, the most lamentable consequences must ensue."

In one view of this question, we are required to look for a probable tendency to conduct dangerous or injurious to the lunatic or others,—in another, to the mere existence of a delusion without reference to its influence on conduct,—and in a third, to the presence

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it may easily find a

* Lunacy. Copy of a LETTER to the LORD CHANCELLOR from the COMMISSIONERS OF LUNACY, with reference to their DUTIES & PRACTICE. (Lord Ashley.)

justification for signing a certificate of insanity in the very vagueness of the subject: he may readily pick up some author or commissioner whose opinion will fully warrant the locking up of the patient, either for the sake of treatment, the prevention of wasteful expenditure, or of danger to others. The Commissioners are themselves, however, sometimes puzzled to form a judgment.

"In the majority of cases which come under the cognizance of the Commissioners, they have little difficulty in satisfying themselves as to the state of mind of the patient; but cases of nicety and difficulty occasionally arise, exhibiting such peculiarities, and differing so decidedly in some respects from all others, that the Commissioners, in dealing with them, have been unable to lay down any general rule or principle for their guidance. In no case have they decided that opinions, however wild or extravagant, which were common to any class or body of persons, either in reference to religious belief or otherwise, constituted or amounted to insanity."

It appears to us, that in the face of the facts which have come to light regarding the Nottidge case,* it has required no small amount of moral courage on the part of the Commissioners to publish such a statement: for in this case there was nothing to justify the incarceration of the plaintiff but the alleged belief in some "wild and extravagant" opinions respecting religion.

After the facts revealed by this case and some others, which plainly show that the Commissioners are not sufficiently careful in their inquiries regarding the causes of confinement, and the private circumstances under which persons are confined, we hesitate to assent to the position that "every person placed in confinement as a lunatic, must *prima facie* be presumed to be insane." The mode in which the necessary certificates of any two medical men are sometimes obtained is decidedly

objectionable, and liable to the greatest abuse. An industrious solicitor, acting on the part of some members of a family desirous of confining an obnoxious relative, who entertains fanatical opinions on religious subjects, will find no difficulty in procuring the necessary legal certificates. He may, it is true, apply to five or six medical men in succession who may refuse to have anything to do with the case; but this will only lead him to seek for others more pliant, and perhaps of less experience on the subject of insanity. One great and undoubted evil of the present law is that any two licensed medical practitioners, whether they have or have not before seen a case of insanity, may fill up a certificate, and, if they have kept to the letter of the statute, may escape all responsibility for the result. There cannot be any confidence in signatures, when the party who may be interested in confining another can procure them by such means as those above mentioned. The signature of a relative is necessarily open to suspicion. The certificates of medical men under the present law cannot be always trusted, since they may err without any imputation on their motives,—from mere want of experience in a most difficult branch of medical practice.

It has been suggested by an eminent American writer, Dr. Ray, that "no patient should be admitted (into an asylum) without a certificate of two or more physicians, one of whom should be an *expert*, countersigned by the select men of the town, or mayor of the city in which the patient resides, that the individual is insane, and is unable to receive at home that care or attention which is necessary to his restoration, or to his temporary comfort, or final welfare." We would go further than this, and suggest that *two experts*, or men experienced in the subject of insanity, should alone be allowed to sign these cer-

* See our last volume, pp. 974 and 1061.

tificates; and, in order to provide against cases of emergency, any patient admitted on the common certificates of two licensed but, perhaps, inexperienced persons, should be visited within a week by two or more competent practitioners appointed for this purpose in each county. They should then be at liberty to confirm or annul the certificate previously obtained. The Nottidge case shows that the periodical visits of the Commissioners do not afford sufficient protection against the improper confinement of alleged lunatics.

By the adoption of some such plan as this,—i. e. the placing of the power of confinement in the hands of *competent* and really *independent* persons, who have no interest in the family or in the asylum, either directly or indirectly, and who are not to be cajoled by a solicitor, earnest only to fulfil his client's wishes, and too often unscrupulous as to the means by which he secures success,—the necessity for a precise statement of the circumstances which should justify the confinement of an alleged lunatic would no longer exist. At any rate, under the present statute, the party whom it is proposed to confine should have fair play, and be allowed to employ a solicitor on his side, to procure counter-certificates showing that he is not mad; and, until an inquisition has been held, these counter-certificates should be admitted to neutralise those under which the party might otherwise become the inmate of an asylum.* The counter-certificates might really be granted by competent persons, yet legally the keeper of an asylum will be justified in receiving a patient, provided the forms of the statute be gone through, even by the authority of men who may have never before seen a case of insanity.

* Dyce Sombre's case proves that if parties alleged to be insane are only allowed this sort of fair play, it is possible, by the aid of substantial fees, and the exertions of a clever legal man of business, to procure certificates that the person is sane, and that the facts upon which the other members of the family rely, are really not indications of insanity.

In conclusion, we may observe that, according to the best authorities, there are three objects for confining the insane—First, their own restoration to health; secondly, their comfort and well-being merely, with little expectation of their cure; and thirdly, the security of society, including the security of the insane themselves, either in regard to person or property.

The great question respecting confinement rests on the two objects first mentioned. Are we justified in consigning to an asylum an individual alleged to be labouring under insanity for the sake of treatment, or to provide for his comfort and well-being? The Chief Baron has decided that these are not sufficient legal grounds for confinement; and, unless the insanity were of a clear, distinct, and unambiguous kind, it is proved by the result of the Nottidge case, that a heavy responsibility may be attached to the incarceration of a person whose insanity is open to dispute. Even in this case, the defendants did not plead that they confined the plaintiff merely for the restoration of her health, or to provide her forcibly and against her will with what they called a comfortable home; but they pleaded in defence what they could not prove,—namely, the common motive that the plaintiff "was in such a state of mind as to be likely to injure herself and other persons." It is contended by a respectable contemporary that, "if the person be insane, and if the mind be clearly disordered, a *prima facie* case exists for confinement or surveillance of some kind or other. Further, we may safely predicate that an *insane* person is both dangerous to himself and others, whatever may be the degree of mental disturbance."* We agree in this view, and also in the position that it is not in our power to predicate that a person is "sane" whose mind is

clearly under the influence of disease; but the difficulty is, how shall medical men, competent or incompetent, recognise these cases? It is the *if* which is the very essence of this much-disputed question. How are we to know when the mind is clearly disordered—when the person is really insane? Wild and extravagant religious opinions are, according to some, indicative of this disorder, and would justify locking up; but, according to Lord Ashley and the Commissioners, the possession of these does not constitute or amount to insanity; although they allowed a person upon no other grounds to remain in confinement for seventeen months, and ultimately pronounced her to be competent to manage her own affairs, when her religious opinions continued unchanged!

Any man of experience in insanity who can help us to some consistent rule for distinguishing *real* from *imputed* insanity, will confer a great service on the profession and public. The question of confinement will then become very simple. Lord Ashley certainly does not remove this difficulty. In a quotation already made from his pamphlet, the Commissioner states that according to law *any person* of *unsound mind* may legally and properly be placed in confinement; but on the other hand, persons who are *not* of unsound mind ought not to be so placed; and it appears to us questionable whether it be safe or just, although it may be strictly speaking legal, to confine in asylums all persons in whom there may be only mental weakness, which does not materially affect the conduct of the individual. In the meantime, the words of Dr. Ray deserve to be impressed upon the minds of all those who are likely to be applied to for a certificate on these occasions.

"Among the reasons generally offered for taking this measure (confinement in an asylum), we hear, perhaps, that the patient is destroying the peace of his family by constant ill-temper, or by

overbearing or furious deportment, or that he cannot receive in his own house the attentions which his situation requires. The idea of depriving a person of his liberty, merely because certain other persons who would be benefited by such a step, say that he is mad, is of so monstrous a nature, that one finds it difficult to believe that it has ever been actually carried into practice. Perhaps, in this country (America), it never has; if so, however, it is not because it has been prevented by the salutary restraints of the law, which in many States, at least, is utterly silent respecting it. It may not have entered into the minds of grasping and ill-natured relatives, that removal and confinement present a readier means of obtaining the control of property on which their affections are placed, than the slow and uncertain effects of disease or old age; but it would be unwise to act as if this state of innocence were to continue always. In Great Britain, where the confinement of the insane has been the subject of much parliamentary inquiry, and various acts and amendments to acts have been passed, for the purpose of preventing the abuses that from time to time have been brought to light, this measure has in consequence become so hedged round with checks and precautions, that it would seem difficult, if not impossible, that it should become a means of injustice and cruelty. How far the object proposed has been obtained, may be sufficiently understood from the testimony of one whose ample experience rendered him well qualified to give it. 'It is a miserable thing to come away from a lunatic house, as I have many times done, with a conviction that there were individuals in it, whose liberation and a proper superintendence would turn wretchedness into comfort, without endangering the interests of any human being; persons unfit, perhaps, to return to their families, or even to see them every day; but yet alive to warm affections, never more to be indulged; longing as parents long, to see the faces of their children; but, in consequence of an infirmity of temper, doubtless of a morbid kind, and requiring superintendence, subjected to live and die in a place which was to them a prison, without a friend with whom they could unreservedly converse.'"

Résumé.

A Practical Treatise on Inflammation of the Uterus and its Appendages, and on Ulceration and Induration of the Neck of the Uterus. By JAMES HENRY BENNET, M.D. 2nd Edition, pp. 527. London: Churchill. 1849.

No two books on the same subject, with the same object, and by the same author, could possibly be more unlike each other, than is this second to the first edition. It is, as the author states, "in reality a new work"—not new by the mere spreading out of type—but new as to the quantity, if not as to the quality, of the matter. On this point, however, let the author himself speak—

"In the first edition of this work I confined myself to the description of inflammation in the cervix uteri. In the present, in order to give a clear and complete history of uterine inflammation, I shall not only study it separately in each region of the uterus, but I shall endeavour to elucidate, in a much more complete manner, the portion of the subject to which I formerly confined myself. Although unfavourable to complicated divisions, subsequent researches have shown me that the division which I formerly adopted was incomplete, and I have consequently modified it. Instead of examining inflammation and ulceration of the uterine neck successively in women who 'have never conceived,' and in women who 'have conceived,' I shall give a general description of inflammation in this region, both acute and chronic, and then devote separate chapters to the consideration of the peculiarities which the disease presents—1stly, in *virgins*; 2ndly, in *pregnant women*; 3rdly, in the *puerperal state*; and 4thly, in *women who ceased to menstruate*." (p. 22.)

We shall endeavour to present a clear but brief abstract of each section presenting novelties either of theory or practice. In a work professing to contain so much that is original, "on an entirely new field of practice," we conclude that this will be the most judicious course. As for ourselves, in common with the generality of practitioners, we must confess to a much smaller amount of experience in the class of cases here described than is possessed by Dr. Bennett. Following, then, the order of the subjects in this work, we first meet with—

Metritis, acute, in the non-impregnated non-developed uterus, is a rare disease, and is even less frequent than is supposed when separated from inflammation of the lateral ligaments,—a mistake frequently made. This rarity is the natural result of the peculiar, dense, fibro-muscular, non-cellular, structure of the body of the uterus.

Acute metritis generally affects the whole body and neck of the uterus, but seldom extends to its peritoneal membrane, except in the puerperal state. Among its predisposing causes are the plethoric temperament, and a peculiar susceptibility which exists in some females to uterine congestion and inflammation; a state in which,

"It would seem as if, with them, either the molimen 'hemorrhagicum' was so great as to distend beyond measure the uterine tissues, thus giving rise to extreme congestion and pain, or as if the uterus was so peculiarly sensitive, that even the physiological menstrual congestion could not take place without its sensibility being anomalously raised." (p. 26.)

Among its exciting causes are arrested menstruation, sexual excesses, and the extension of chronic inflammation from the neck of the organ.

"To these I would add," observes Dr. Bennett,—and to this observation we would draw the especial attention of our junior readers,—"*as occasionally causing acute inflammation, all kind of surgical interference with the uterine organs, such as the cauterization of ulceration of the cervix, the use of vaginal injections, of pessaries, &c.*"

This fact deserves to be borne in mind more generally than it is, at the present time, when instrumental interference may be said to be more fashionably than judiciously employed. To this we think the author himself has not a little contributed.

Chronic metritis occupies only a limited extent of the uterine tissues. It occurs as the termination of acute inflammation, or by extension from the cervix.

The symptoms are most evident at the menstrual period, in the intervals being much mitigated. They consist in dull aching pain in the hypogastric and lumbo-sacral regions, extending round the pelvis and down the thighs, and accompanied with a sense of deep-seated weight in the pelvis, at times rendering movement unbearable. Di-

gital examination detects an exquisitely sensitive and irregular surface of the uterus, and according as this tumefaction occupies the anterior or posterior surface of the uterus will there be a tendency to anteversion or retroversion (wherefore, we do not perceive). The general symptoms are accompanied by the peculiar aspect known as the "*facies uterina*." Nausea is also a general and almost diagnostic symptom. Chronic metritis, though not a fatal disease in itself, becomes a source of danger by undermining the constitution.

Internal metritis, or uterine catarrh,—inflammation of the mucous membrane lining the cavity of the uterus. Dr. Bennet states that this is not a common disease, although spoken of as such by continental writers; that it has been confounded with a common disease—viz., inflammation of the cervix. The uterine cavity in the unimpregnated state is extremely limited, and according to the researches of M. Vidal de Cassis does not contain more than from nine to eleven minims of fluid. The cavity of the uterus is separated from the cavity of the cervix by a natural constriction or internal sphincter, which forms an obstacle to the introduction of the uterine sound. Internal inflammation, when it occurs, may be considered as an extension of the inflammation of the cavity of the cervix, except in those cases in which it is connected with inflammatory affections occurring after parturition.

Inflammation and abscess of the uterine appendages.—These Dr. Bennet divides into puerperal, and non-puerperal. The latter form the author considers to exist much more frequently than has been generally stated, and that consequently it has been much overlooked by writers. With regard to the seat of the disease the author states:—

"In non-puerperal inflammation of the lateral ligaments the disease is very evidently limited, in most cases, to the cellular tissue, and to the organs contained between them, and does not extend to the free cellular tissue of the pelvic cavity." (p. 61.)

The causes of these forms of pelvic disease are the same as those of acute metritis. The symptoms also nearly resemble those of acute metritis, but their locality may serve to distinguish between the two. The diagnosis can only be certain by the aid of digital ex-

amination. Suppuration is the result of the inflammation unless the disease be early checked: the pus may find its exit by the vagina, rectum, abdominal parietes, bladder, labia, or thigh.

"The malady, however, is essentially a chronic one." And by whatever channel the pus escapes, it "may be from several months to one or two years before all trace of local inflammation has disappeared, and before the patient can be said to be radically well." (p. 71.)

In the puerperal state abscess of the uterine appendages is mostly the result of the extension of metro-peritonitis, and is not easily detected until the former has subsided. The malady may, however, occur primarily from premature exposure after labour, from cold, &c. The disease is then one of much greater severity and danger. Dr. Bennet considers that the mortality has been greatly exaggerated.

Inflammation of the neck of the uterus.

—The cervix uteri containing more cellular tissue and bloodvessels, and possessing a more fully developed membrane than the body of the organ (the reverse is stated by M. Duboir), is more prone to inflammatory disease. "Inflammation of the cervix may commence in the mucous membrane covering the cervix or lining its cavity, or in the mucous follicles which that membrane presents, or in the substance of the organ." Deviations from normal menstruation constitute the most frequent predisposing causes, more especially in virgins, while in the married female sexual intercourse predisposes to the same result, as do also pregnancy and parturition, as well as various morbid conditions of the uterus and vagina.

The symptoms of inflammation of the cervix uteri are divided by Dr. Bennet into the anatomical, local, functional, and sympathetic; changes which take place in the appearance, form, and structure, and are appreciated by the touch or by instrumental examination, Dr. Bennet describes the alteration in the appearance of the cervix uteri, under inflammation.

When viewed by the aid of the speculum the internal surface is found to have become of a vivid red tinge, and dotted with florid papulæ, or white pustules, consisting of mucous glands, hypertrophied or distended with muco-pus. The red colour may vary in its shade. The surface is covered with muco-pus,

which is important in a semeiological point of view, as distinguishing the state from that of mere congestion, in which the muco-pus is absent.

When the inflammation attacks the cavity of the cervix, that passage, as Dr. Bennet points out, is open as far as the internal stricture, which is closed. It is, as already remarked, from overlooking this fact, Dr. Bennet observes, that inflammation of the internal aspect of the cervix has been mistaken for internal metritis. The glairy mucus which constitutes a common form of the "whites," is the natural secretion of the inflamed mucous membrane of the cavity of the cervix. Ulceration in all its modified forms follows at uncertain intervals on inflammation of the cervix. The varied aspects of these ulcers are described by Dr. Bennet as presented to view by the speculum. We hesitate to believe in the existence of ulceration of the os and cervix uteri, so commonly as some authors would lead us to suppose, from the circumstance that during upwards of two years' close attendance upon the necroscopic examinations of one of the largest metropolitan hospitals, we have not met with a single instance of the kind in all the *uteri* we there examined.

Induration, hypertrophy, and displacement of the cervix, are among the consequences of its inflammation. Besides these, the inflammatory action extends to adjoining organs, or produces in these sympathetic irritation. The pain is thus frequently referred to other than the seat of the disease, and has thereby led to obscurity in its diagnosis. The functions of the uterus in the cervix of which inflammation exists, are necessarily interfered with, and consequently menstruation becomes painful and irregular. Sterility, also, is induced by the condition, and is removed by its cure.

Inflammation of the cervix may occur in the virgin, in the pregnant female, after parturition, and in advanced life. The symptoms and history will vary in each class of cases. These variations Dr. Bennet follows in detail, and describes their particular features, illustrating them also by the relation of several cases under each head. In reference to the virgin state, we make the following extract, and leave it to the judgment and experience of our readers, not having ourselves ever met with, or

heard of, a case in which the course advised could have been deemed justifiable. After having spoken of the discovery of ulcerative disease by a digital examination (an operation of itself certainly not to be lightly undertaken), the author states:—

"As this form of disease reacts so disastrously on the female economy as absolutely to endanger indirectly the life of the patient, not to speak of its making her a burden to herself and all around her; as, likewise, all non-instrumental means of treatment are totally inefficacious when the disease is severe, I think there can be no room for hesitation. *The speculum must be used, if possible without dividing the hymen; but if its introduction is otherwise impossible, the hymen must be carefully divided*" (p. 167).*

We cannot but observe upon this advice that it is more than probable that a parent might not concur in the opinion that "no room exists for hesitation," the more especially as the very act of exploration itself carries with it a degree of *primæ facie* evidence that there is only a probability of the existence of the disease for which it is employed, and which it is quite possible may be absent. We can hardly suppose that in such a case the remedial applications would be made without the ocular inspection for its warrant. We hesitate, therefore, to commend this advice of Dr. Bennet's to other than the most guarded adoption. Past and present experience must compare many more notes before such a practice can be admissible. There no longer exists any doubt on the minds of well-educated practitioners as to the great advantages to be gained in the investigation of uterine diseases from the assistance of the speculum. It is to the uterus as the stethoscope is to the thorax; but its employment is open to more serious moral objections.

While we refer our readers with satisfaction to this work for information on a hitherto most obscure and difficult class of diseases, we at the same time protest against its tendency to encourage instrumental practice.

We shall conclude our notice of this treatise by considering Dr. Bennet's remarks on the various instruments now employed in uterine pathology.

The bivalve speculum is employed by

* The Italics are our own.

Dr. Bennet to the exclusion of others, as it possesses the advantage, by the expansion of its blades, of bringing the os uteri more completely into view. The conical speculum is considered by the author as preferable for the beginner in these vaginal inspections. Dr. Bennet commends the uterine sound, invented by Dr. Simpson, but points out that it often does not enter the cavity of the uterus by reason of the opposition presented by the internal structure. It is probably owing to this that less injury has followed its employment than we have heard of. Dr. Bennet is on this point somewhat inconsistent; he has pointed out that this structure presents a natural obstacle to the use of the sound; but still he would have it introduced *vi et armis*.

We conclude our notice of this work by commending it to our readers as conveying much instruction on uterine disease; but of a kind, nevertheless, to be used with very great caution. The author entirely overlooks the fact that a very large proportion of the cases which he describes fall to the share of other practitioners, and get well by treatment conducted on general principles, while it is on record that lives have been lost by the use of instruments, cauterization, &c.

Hints on Obstetric Practice, with illustrations. By JOHN BREMNER, Surgeon, Newbyl. Part I. 8vo. pp. 98. Edinburgh: MacLachlan and Stewart. 1849.

THIS first part of the author's hints embraces the subjects of venesection and of opium, as employed in obstetric practice.

With regard to the former the author observes:—

"The principal topics selected for investigation are—1. The circumstances requiring it; 2. The extent to which it is to be carried, including certain remarks respecting its performance; and 3. The period at which the operation may be had recourse to, in order to derive from it the most eminent services to the parturient female. (p. 2.)

In order to arrive at answers to these several questions, the author reviews at considerable length the opinions of several eminent obstetrical writers, and thence exposes the great contrariety of opinion that exists as to the employment of venesection during or before labour.

The conditions which the author considers to call for the abstraction of blood, are—1. That of plethora or general excitement; 2. A state of excitement of the os uteri and external parts; 3. An undeveloped state of the cervix uteri; 4. Irregular action of the uterus; 5. Premature rupture of the membranes of the ovum.

In regard to the time at which venesection should be had recourse to, the author advocates its employment in the early stages of labour, or even in the latter months of gestation.

From the author's remarks on the exhibition of opium, we gather that he regards it as secondary to or as assisting the effects of blood-letting. Where the latter has not been had recourse to, opium is doubtless of great value in allaying spasmodic or irregular action of the uterus. The judicious employment of the drug in these cases has long been recognised by obstetricians.

The author appends a few cases illustrative of the practice he inculcates. We feel a suspicion, derived from many years' obstetrical experience, that the author's views lead to the somewhat too frequent employment of venesection and exhibition of opium.

The perusal of the cases given, further leads us to incline to the opinion that little harm would have accrued to many of the patients if the "tincture of time" had been more liberally administered. We are not convinced that venesection may not sometimes create the necessity for the exhibition of opium. Neither are we prepared to admit from what we have seen of the action of this drug on the parturient uterus, that "it first exerts a sedative, and very frequently hypnotic effect, before its stimulating properties become apparent." We have never observed this reversing of the usual action of the remedy, but we have often seen uterine action suspended by its operation.

System der Physiologie. Von CARL G. CARUS. 7th and 8th Parts. 8vo. Leipzig. 1849.

THE parts which we here bring under our readers' notice are the concluding portions of a systematic treatise on physiology, which the author had brought out in parts. To these, however, owing to the irregularity with which continental publications sometimes reach us, we

have not before had an opportunity of directing our readers' attention.

The author's high reputation is well known to English students of German medical literature, and is sufficient guarantee that this work will repay their perusal.

We must confine ourselves to a notice of the contents of the two parts before us: these are the conclusion of the last section of part 6, on the sense of touch; the sensibility of mucous surfaces; the senses of smell, taste, sight, and hearing. The physiology of the skeleton and osseous system; of the muscular system; of the organs of reproduction; and the psychological functions of the brain.

We here quote the author's views with regard to the physiology of the ovary. The opinions of Carus are appealed to by the upholders of the ovular hypothesis of menstruation. The following extract will, we trust, give our readers some notion of the extent and character of the treatise itself, besides placing before them the author's ideas on a contested point:—

"The ovaries at the time of birth are found to contain microscopic ovisacs, the development and final expulsion of which is their essential function. In their subsequent growth the following are the circumstances chiefly to be noted:—

"1. The ovary gradually increases by the growth of its parenchymatous structure, at the same time that the graafian vesicles containing microscopic ovules attain a diameter of from 8-10ths to 9-10ths of a line, and approach the peritoneal aspect of the organ, which has acquired a width of from 12 to 15 lines, and a length of from 6 to 8 lines.

"2. As the ovary reaches its full development, and the unfolding of the sexual character advances, a periodical excitement of the ovary takes place, in consequence of which blood is effused in a follicle, and inflammatory tumefaction occurs, concurrently with rupture of the follicle, and discharge of its fluid contents with the microscopic ovum.

"3. From this moment the biotic activity of the ovary suffers a retrogression, the inflammatory signs disappear, the place of the follicle contracts, and a yellow depression remains, known by the name of *corpus luteum*.

"4. This process of alternate vital exaltation and retrocession may possibly be repeated as often as there are ovules originally formed.

"5. In the later periods of life, not only

the special sensibility of the ovary becomes extinguished, but development ceases, the fluid of the follicle becomes absorbed, ovulation is arrested, the stroma of the organ becomes more compact, and it exhibits only vegetative life until death supervenes." (p. 654.)

British physiologists will not require to be told that the second, third, and fourth of these positions are yet deficient in proof. Indeed, the author appends a note stating that he has found fully developed follicles and ova in the ovaries of infants—a fact fatal to the conclusions which the author, in common with some English writers, have considered as deducible from the preceding propositions.

Des Angusties ou Rétrécissements de l'Urètre, et de leur Traitement Rationnel. 8vo. pp. 488. Paris.

Histoire de la Lithotritie. 8vo. pp. 169. Paris.

Recueil de Lettres et de Mémoires adressés à l'Académie des Sciences, pendant les années 1842 et 1843. 8vo. pp. 364. Par LEROY D'ETIOILLES, Docteur en Médecine, &c. &c. Paris.

In the first of these treatises the author discusses at great length the subject of strictures; and we are disposed to think that he has succeeded in producing a tolerably voluminous essay on the subject, as compared with the brief but luminous practical essays to which we are accustomed on this side the British Channel. Dr. D'Etioille's treatise, however, contains a complete account of the causes, symptoms, history, and treatment of strictures, of puncture of the bladder, of extravasation of urine, and of urinary fistula. The subject of the treatment of stricture of the urethra the author sums up in a series of aphorisms. From these we learn that, though favourable to cauterization and scarification in some cases, the author lays more stress upon dilatation. This essay is deserving of consultation by surgical students.

The History of Lithotrity embraces an account of the invention of the various instruments which have been, from time to time, introduced for the performance of this operation, and is accompanied by engravings of these. It is also much occupied by a literary warfare with M. Civiale; on which, however, it is needless for us to dwell. A

vast amount of mechanical ingenuity is shown to have been expended on the contrivance and improvement of the several instruments. This essay will furnish much information regarding these, as well as on several other allied subjects; among which is the solution of calculi in the bladder.

The collection of letters and memoirs embraces the subjects of insufflation of the lungs in asphyxia; researches on the deleterious action of black blood; the employment of galvanism in strangulated hernia; the reproduction of the crystalline humour; new instruments for staphylophary; the solution of urinary calculi; neuralgia of the neck of the bladder, and spasm of the urethra; hæmaturia, and the means of extracting coagula from the bladder; the cancerous diathesis; vesico-vaginal fistula; animal electricity; air in the veins; electro-puncture; the course of the bile; extraction of foreign bodies from the external auditory passage; acute inflammation of the ovaries and fallopian tubes; aneurism; operations on the rectum; polypi of the pharynx; artificial pupil; tonsillotomy; enumeration of the author's inventions, scientific works, memoirs, &c., in the order of their importance.

Whatever may be the verdict of his readers as to the value of these essays, *de omnibus rebus*, at least the virtue of industry and love of his profession must be accorded to the author.

MIASMATIC TOXICOLOGY. — INTERMITTENT FEVER.

Dr. Houzé lays down the following propositions:—

1. That the words essential fever, intermittent fever, are in the present day no longer applicable.
2. That all attempts to localize these affections have failed.
3. That the miasmatic principle impregnates the entire animal economy in the same manner as certain poisons.
4. An accidental localization often attends the general impregnation.
5. That the consecutive accidents, enlargement of the spleen, &c., are determined by repetition of these temporary localizations.
6. That fevers should be ranged as a subdivision among the effects of poisons.—
La Presse Médicale.

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Proceedings of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, Jan. 22, 1850.

DR. ADDISON, PRESIDENT.

Chemical Researches on the Nature and Cause of Cholera. By ROBERT DUNDAS THOMSON, M.D., Glasgow. [Communicated by Sir R. C. BRODIE, Bart.]

IN the first part of the paper the author details the results of chemical analyses of the blood, urine, and intestinal discharges in the cold or "lymphatic" stage of cholera, and in the "biliary" or febrile stage.

The main results arrived at are, that in the cold stage of the disease, the specific gravity of the blood, and of the serum separated from the clot, is increased; that the proportion of water is less than in health by at least 9 per cent., and in some cases by as much as 17 per cent.; that both the organic and the inorganic components of the blood are proportionally increased in amount; but that the increase of the insoluble salts is much greater than that of the soluble salts; 2. That the intestinal discharges in the cold stage, when of the true "rice-water" character, resemble closely in their chemical composition the fluids of hydrocele and hydrocephalus; that their flocculi are formed of epithelial scales, and the watery part of water, containing a small proportion of organic matter (albumen) and salts (chloride of sodium, carbonate of soda, earthy phosphate, alkaline sulphate, some lime); 3. That the small quantity of urine sometimes found in the bladder in this stage presented no apparent aberration from an ordinary standard; 4. That in the biliary or febrile stage of cholera the blood soon regains its normal proportion of water, or even an excess of it; and that the other constituents resume their natural relation to each other; 5. That the urine in the biliary stage in several cases contained albumen, but presented scarcely any other deviation from the urine of health, except in the amount of urea, which at first was deficient.

In the second part of the paper the author describes some experiments instituted by him with the view of determining whether any poison could be detected in the atmosphere. In one series of experiments it was ascertained that no solid matter existed in the air, but ammonia was obtained from it in the proportion of 0.319 gr. of caustic ammonia, or 0.731 gr. of carbonate of ammonia to 1000 lbs. of air.

By another series of experiments it was determined that no carbon or hydrogen existed in the atmosphere except in the states of carbonic acid and water; while carbonic acid was obtained in the proportion of 1 vol. to 6650 vols. of air.

In his concluding remarks the author argues that the cause of cholera is not a specific tangible poison introduced into the body from without, but rather a vicarious transference of the cutaneous excretion to the intestinal mucous membrane, dependent partly on an atmospheric influence, and partly on a predisposing state of the system in those who are affected with the disease.

The next meeting of the Society will be held on Tuesday, the 12th February.

PATHOLOGICAL SOCIETY OF LONDON.

Jan. 7, 1850.

MR. CESAR HAWKINS, PRESIDENT.

DR. R. QUAIN exhibited a specimen of *Fatty degeneration of the heart—Death by apoplexy*;

and gave the following outline of the case:—

A lady, 65 years of age, very fat, of sedentary habits, very temperate, had generally enjoyed good health, with the following exception. She had an attack of disease connected with the liver some six months before her death. She suffered frequently from "spasmodic pains of the stomach," from difficulty of breathing, also from headache, and for a few days before her death from a dull pain in the region of her heart. On the night of her death (New Year eve) she had supped with some friends, and then walked about three quarters of a mile to a religious meeting. After this she walked home, a little more than half that distance, retired to her room, and died shortly after, instantaneously.

After death.—The body was extremely fat. The chest small. The lungs tolerably healthy (old dry tubercles). The heart large, covered with fat. The right auricle and ventricle filled with dark coagula. The muscular parietes of this ventricle were much thinned by fatty tissue intruding on and covering the fibres. In several points of this ventricle the fibres had also undergone fatty degeneration, particles of molecular fat filling the fibre. Similar degeneration was found in the left ventricle. This ventricle felt firm and strong, compared with the right, which was soft and flabby. The gall bladder contained a transparent fluid, and several calculi, by one of which its duct was plugged up. The kidneys

enlarged, and found to contain much granular matter in the cells. The immediate cause of death was found in the head. Extensive meningeal apoplexy had occurred; the effusion being chiefly in front and at the base. The substance of the brain was quite healthy.

Dr. Quain thought that as in one class of cases hypertrophy of the left ventricle was capable of producing apoplexy by its direct force, in another class of cases, of which this was a good example, obstruction to the flow of blood from the brain led to congestion of this organ and hæmorrhage; the source of obstruction in this instance being the impaired power of the right ventricle, to send the blood through the lungs, which had accumulated as found after death, and thus caused congestion and hæmorrhage.*

DR. QUAIN presented a drawing also illustrating

Fatty degeneration of the heart—Death by angina pectoris.

A man, about 50 years of age, of temperate habits, following a sedentary occupation, had three or four years complained of pain in his chest: latterly this symptom had been more distressing. On the day preceding his death, being more than usually engaged, he substituted some bread and cheese for dinner, and in the evening when walking home he was seized with his usual pain, but in so severe a form that he sought medical advice. The surgeon who saw him recognized the disease as well-marked angina pectoris, and gave the patient a draught containing ether, &c. He felt better, and went to bed. He was found dead in the morning by his bed-fellow, who was not aware of the occurrence until then.

After death.—The body was in good condition, but not fat. There was no disease of the brain. The lungs were emphysematous, and there were old adhesions at the lower part of the right one. The heart was about the natural size, much covered with lobulated fat. The right auricle contained a good deal of dark coagulum, the right ventricle less. There was nothing to observe as to the contents of the left cavities. A hæmorrhagic spot, the size of half a small walnut, with some smaller points around it, was seen at the base of the right ventricle, situated in the substance of its wall. The tissue around had undergone fatty degeneration. The coronary artery leading to this side of the heart was ossified and narrowed. The substance of the left ventricle was pale, flabby, and mottled with buff-coloured spots, in which the fibres were found degenerated. The abdominal organs

* See a paper, "Observations on Cerebral Apoplexy," London Journal of Medicine, January 1846.

were healthy. The kidneys were rather larger and coarser in texture, perhaps, than natural.

The case was one which illustrated the condition called by Cruveilhier "cardiac apoplexy," and also one of the circumstances under which this lesion occurred—viz. fatty degeneration of the heart—a condition, however, which this eminent pathologist had not recognized.

The two preceding cases, with two others presented at a former meeting of the Society, one by Mr. Avery, the other by himself, showed how important is the study of this disease.

In the first case (Mr. Avery's) sudden death resulted from partial fatty degeneration of the left ventricle, and consequent rupture of the heart.

In the second case sudden death resulted from more general degeneration of the same ventricle, and consequent syncope.

In the third case, fatty degeneration of the right ventricle had in all probability been the immediate exciting cause of the apoplectic effusion.

In the fourth case, degeneration of the same ventricle (and of the opposite one to a less extent) had been the source of the distressing symptoms (of angina pectoris) during life, and of the result which had been detailed.

Jan. 21, 1850.

DR. LATHAM, PRESIDENT.

Mr. PRESCOTT HEWETT presented a well-marked specimen of

*Aneurismal Dilatation of the Left Auricle, with thickening and contraction of the Left Auriculo-ventricular Opening.**

The dilated auricle, of the size of a large orange, presented, when cut into, the appearance of an aneurism, its cavity being filled with firm fibrinous coagula of a grey colour, and, for the greater part, distinctly laminated: towards the centre, however, the coagula were soft and broken down, but still quite distinct from the blood which had coagulated in the auricle since the death of the patient. The layers of coagula in contact with the walls of the auricle were adherent to them in several places; and after their removal several small spots of calcareous matter were found deposited under the serous membrane of this cavity. The mitral valve was much thickened, and the auriculo-ventricular opening contracted, so as only to admit of the middle finger being passed through it. The fossa ovalis, which had assumed a round shape, was of the size of a half-crown piece, and its membrane, very much attenuated, was nearly transparent. The

right auricle was somewhat dilated, and contained in its appendix a coagulum similar to, but much smaller than, that which was contained in the left auricle. The other parts of the heart presented nothing remarkable.

This preparation was taken from a woman, æt. 38, who was admitted into St. George's Hospital, under the care of Dr. Wilson, for ascites and universal anasarca, accompanied by great difficulty of breathing. The countenance was dusky; the jugulars were much distended; the skin was cold; the heart's action irregular, and felt over a large surface; the pulse was very feeble, and the urine was scanty, but did not coagulate either by acid or by heat. She had had rheumatic fever some eleven years before her admission, but had never suffered from palpitation until within the last six months. She had been in the hospital once before, with symptoms of heart disease, and had left very much relieved. After her last admission she lived nine days, during which time there was a great aggravation of the symptoms: she became exceedingly weak, and gradually sank.

Mr. POLLOCK exhibited a specimen of *Aneurismal Dilatation of the Right Auricle from Contraction of the Right Auriculo-ventricular Opening: with the following Remarks:—*

The specimen was taken from a patient who was admitted into St. George's Hospital, under Dr. Wilson. She was 38 years of age, and had enjoyed tolerable health to within a fortnight of her admission. Three days before her admission she was attacked with palpitation, with a distressing amount of dyspnoea, aggravated in paroxysms. Two days before admission she had an attack of hæmatemesis, which she referred to the absence of the catamenia. The first indication of her illness was anasarca accompanied with ascites; but the history of her symptoms was short, and not very satisfactory. The lips and extremities were extremely livid and congested, and she suffered from dyspnoea and orthopnoea to a frightful extent. The face was puffy, and extremities anasarcaous; urine scanty and albuminous, and loaded with lithates. Pulse rapid, weak, and very small, extremely irregular, and sometimes intermittent. There was violent and tumultuous action of the heart, and a loud systolic murmur, heard loudest perhaps towards the apex of the heart, but distinctly also at the base of that organ. A diastolic murmur, heard loudest on the sternum, at about the level of the lower margin of the third rib, sometimes but not invariably accompanied the heart's action. There was decidedly extended dullness on percussion in the præ-

* This preparation is in St. George's Hospital.

cordial region. On the right side there was considerable effusion into the pleura. She had never suffered from rheumatism.

Under the treatment of Dr. Wilson she improved very much, and in the course of a fortnight the palpitation had subsided to a great degree. Subsequently she relapsed, but again improved for a short time, being relieved by cupping, and the internal use of small doses of bichloride of mercury. On several occasions she had attacks of vomiting, without any obvious cause, with aggravation of the palpitation. After this the symptoms increased, and she died suddenly on the 19th March, about four months after her admission.

Post-mortem examination, 14 hours after death.—The face was dark-coloured, from excessive venous congestion; the abdomen prominent from ascites, and some œdema of lower extremities.

Thorax.—Adhesions of pleura were found on right side, and the cavities of the pleuræ contained some clear serum. Both lungs were much congested, and a good deal compressed, but crepitant throughout. The pericardium contained several ounces of fluid mixed with thin flakes of lymph. The heart was of considerable size. The right auricle much more prominent than usual, and very considerably distended: its cavity was very greatly dilated, and its walls hypertrophied, the muscular structure being considerably developed.

The auriculo-ventricular opening on the right side of the heart may be seen converted into a *small circular opening*, which only allows the passage of one finger. The tricuspid valves, having their edges adherent to each other, are converted into a kind of curtain stretched between the right auricle and ventricle, with the circular opening just mentioned in its centre. The structure of the valves is thickened, of a dense white, opaque, and firm character. The right ventricle is somewhat diminished in size; the pulmonary artery and valves healthy.

The left ventricle was hypertrophied and slightly dilated. The aortic valves much thickened at their edges, and greatly contracted. The root of the aorta contains some specks of atheroma. The mitral valve is much thickened, and its orifice contracted so as only to admit of the passage of one finger. The left auricle is slightly hypertrophied.*

The liver was contracted, and its edges rounded. The kidneys very granular, and their cortical structure much absorbed.

The extent of disease in the specimen exhibited is of very rare occurrence in the

right side of the heart, but in its nature is similar in character to the thickening and contraction of the valves so much more frequently found on the left side of the heart; and I am induced to mention the observations of Dr. Hope in corroboration of this point, as well as to exemplify the accuracy of his investigations. He states that "induration of the right or venous valves is almost always simply cartilaginous or fibro-cartilaginous, and is comparatively rare, not existing in perhaps more than about one case in 16, 20, or more, of disease of the left valves. It seldom presents itself without being accompanied by disease of the left valves also, and it is in general less advanced than the latter." The tricuspid valves are more frequently affected than the pulmonic. I have never seen the pulmonic valves diseased, but I have once found them incapable of closing the orifice, in consequence of dilatation of the artery, and I have seen the orifice contracted to the diameter of a quill, an inch below the valves. Disease of the right valves only differs from that of the left in frequency and extent, its characters being essentially the same.

Dr. WILLIAMS exhibited a specimen of *Diseased Heart, with Ruptured Mitral Valve.*

The subject, a lady, æt. 32, had been rather delicate from infancy, and had been supposed to be affected with some obstruction to the circulation. A few months ago her general health had been reduced by a low fever, on convalescence from which, about three weeks before death, on walking out on a cold windy day, she was seized with severe pain in the left side, and shortness of breath, with violent palpitation, and other symptoms of disordered circulation. These gradually diminished, but the pulse continued very irregular and unequal, and a loud bellows murmur was heard all over the chest. This murmur was found to be loudest below the left breast, although it was very distinct elsewhere, and was so loud in the back that it completely masked the breath-sound; yet there were no signs of extensive enlargement, and the natural double sound of the heart was still distinct at the sternum. It was therefore inferred that there was extensive regurgitation through the mitral orifice; and the loudness of the murmur in the back was considered to be due to the sound being carried backwards through the congested pulmonary veins. The case became aggravated by the supervention of severe vomiting, alternated with attacks of faintness, in one of which she expired, about three weeks from the first attack.

The heart was found moderately enlarged, with a layer of fat considerably

* This preparation is in St. George's Hospital Museum.

encroaching on the thickness of the right ventricle, the muscular walls of which in parts did not exceed a line in thickness. The muscular structure was also of a tawny colour, and under the microscope exhibited in many parts fat globules within the fibres (fatty degeneration). The anterior lamina of the mitral valve was almost completely detached from the muscular columns, its margin hanging loose, and being considerably thickened, opaque, and sprinkled with soft vegetations. The right anterior column was still attached, but much wasted. The substance of the ventricle near the apex was mottled with pale fibrous lymph. The endocardium lining the left auricle was covered with a film of granular deposit, the lines on which marked the direction of a reflux current from the ventricle.

The case formed a striking contrast to some instances of diseased heart just exhibited, in the moderate amount of change in the appearance and bulk of the heart, whilst the functional disturbance had been so much more serious and rapidly fatal. Dr. Williams ascribed the difference to the completeness of the destruction of the valvular apparatus by the rupture in this case, which left no time for those compensations and adjustments by enlargement of cavities and thickening of walls which take place where the lesion is less sudden and complete, which, while they so greatly alter the heart from its natural state, render it better able to perform its work. The fatty deposit and degeneration were also probably concerned in hastening the fatal termination.

Mr. POLAND exhibited a specimen of
Epithelial Cancer of the Pharynx and Trachea,

upon which he made the following remarks:—

Frances P., æt. 31, admitted into Guy's Hospital under Dr. Barlow, had experienced some difficulty in swallowing solids for nearly fifteen years. About two months before admission had caught cold, which was immediately succeeded by increased dysphagia, some dyspnoea, pain about the throat, and failure of the voice. These symptoms gradually became aggravated. On admission she had great dyspnoea and dysphagia, considerable pain and tenderness about the larynx, and some irregularity about the hyoid bone.

Various remedies were had recourse to without benefit. She continued to get worse, and the difficulty of breathing almost amounted to asphyxia, when, on the 10th September, the operation of tracheotomy was proposed and performed. This gave immediate relief. She rallied; could

breathe with ease, and swallow fluids comfortably; and she improved in this way for a month, and remained stationary during the second month. During the third month her former symptoms began to recur. In the fourth month after the operation she emaciated rapidly, had several attacks of alarming asphyxia, and died January 10th.

Post-mortem examination.—The body was extremely emaciated.

The os hyoides somewhat displaced.

The thyroid glands converged inferiorly; so that their two extremities were in close approximation. The inner edge of the left one was just grazed by the knife.

There was an irregular opening in the trachea, through the second and third rings. All traces of the cricoid cartilage were gone, merely a thin cartilaginous membrane being left.

Some enlarged and hardened glands occupied the space between the trachea and œsophagus on the right side.

On laying open the pharynx and œsophagus from behind, it was found that the whole of these structures were involved in that form of malignant disease denominated "epithelial cancer," partly ulcerated, and extending from opposite the hyoid bone, near the bifurcation of the bronchi. The disease had involved the whole of the posterior part of the larynx and trachea, as far as the sixth tracheal ring. There was great pressure and consequent flattening of the larynx, so that the anterior and posterior walls were in contact. Opposite to, and just above and below the seat of tracheotomy, there was an extensive ulcerated opening, laying the trachea into the œsophagus. No cancer in any other portion of the body could be found.

Mr. SOLLY remarked, in allusion to this case, that he had recently had under his notice one of a similar character, and in which he had recourse to tracheotomy, with relief to the sufferings of the patient.

Mr. COULSON also alluded to a case, resembling the one mentioned by Mr. Poland, that had come under his care.

Mr. GRAY exhibited specimens illustrating the

Structure of Cicatrices of Burns,

and remarked that the observations made on the structure of cicatrices of burns would explain their contraction. In the examinations that he had made, the cicatrix was an exceedingly dense band of tissue—inelastic, like ligament, and of great density, deforming very considerably by its contraction the parts to which it was attached. This structure supplied the place of the injured integument, but was much thicker

than the healthy skin, and differed very materially in its structure from it.

He would first consider the structure of the cuticle covering the cicatrix; secondly, of the part analogous to the cutis; and thirdly, of the appendages to this tissue.

The cuticle covering the cicatrix is exceedingly thick, much more so than the ordinary cuticle, so that it is capable of being scraped off in thick scales: it is composed of several laminae, each of which consists of a mass of compressed transparent nucleated cells,—these occupy the surface of the cuticle; those more deeply seated are of a more circular form, and less compressed; whilst those farthest from the surface consist of a mass of granules, which lie apparently embedded in a homogeneous finely-granular matrix. So far the cuticle does not differ, except in thickness, from that covering the cutis in the healthy skin. The structure analogous to the cutis, however, does not present the ordinary appearances observed in this tissue. It is composed of an exceedingly thick, strong, inelastic band of fibrous tissue, separated from the adjacent parts beneath by a thin stratum of areolar tissue: this substance to the naked eye presented the appearance of ligamentous tissue, and, unlike the cutis, it is quite inelastic: the great difference observed between it and the healthy cutis is, that it presents, on microscopic examination, only the smallest trace of the existence of the curly fibres of the yellow elastic fibrous tissue (that element of the cutis which gives to it its great elastic property), but was composed almost entirely of a dense interweaving of the fibres of the white inelastic fibrous tissue. This structure became more evident on submitting portions to the action of acetic acid, which rendered the white fibrous tissue transparent, simply bringing into view here and there a few of the nuclei of the fibres of this tissue, whereas in the healthy cutis, as is well known, the action of acetic acid brings plainly into view the fibres of the yellow elastic tissue, which are very abundant, and not dissolved by the action of this re-agent. With regard to the appendages of the skin, no hairs were observed covering the surface of the cicatrices, nor could the existence of sebaceous glands or perspiratory tubes be detected. From these observations the following conclusions may be drawn:—1st. That almost the entire absence of the yellow elastic tissue in cicatrices of burns, and the density of the new material, the white fibrous tissue, fully accounts for the great contraction and inelastic property of these cicatrices. 2d. That the skin, when destroyed, is replaced, like most other textures, by the formation of fibrous tissue,

and consequently follows the same law that appears general with regard to the reproduction of almost all structures; for, as Mr. Paget has lately shown, whether bone, cartilage, ligament, or muscle, is destroyed, its place is supplied by fibrous tissue: the reproduction of the skin, then, appears to follow the same law, fibrous tissue being the chief element deposited.

Mr. CHARLES HAWKINS presented for the consideration of the Society (through the secretary) an

Osseous Tumor.

The specimen was sent to Sir B. Brodie by Mr. Clements, of Shrewsbury, with the following statement. "It was discovered in the Church-yard of Aston Scott, Shropshire. The grave-digger was occupied in making a new grave in a part of the burial ground which had not been disturbed during the memory of the oldest inhabitant of the parish. No interment had taken place in that part of the ground for at least a century. The grave-digger discovered the remains of a brass coffin-plate, and in a line with the upper part of the plate the specimen produced. On searching the ground more attentively two teeth were found, and the remains of one temporal bone (the petrous portion). The spinous portions of both tibiae were also found, but every other part of the skeleton had mouldered away. It will be seen in the section of the tumor that its texture is as hard as ivory; and it is a curious fact, that whilst almost every portion of the natural formation of the skeleton should have perished, the diseased mass has resisted all the ravages of time and a damp soil in which it lay embedded.

Several members of the Society doubted the suggestion that this tumor should be supposed an exostosis, but rather that it was originally a fibrous tumor, which had subsequently become the seat of calcarous deposit. It was decided that the tumor should be examined chemically and microscopically, and a report made to the Society as to its nature.

Mr. Charles Hawkins also presented a specimen of

Bony Anchylosis of the Radius with the Carpal and Metacarpal Bones.

This preparation was also found in a grave-yard.

Mr. PARTRIDGE exhibited a specimen of
Chronic Ulcer of the Stomach,

which was taken from the body of E. M'L., æt. 42, surgeon R.N., who returned from foreign service about five years ago, in a merchant vessel, which was ill found in provisions, and in which he was exposed to much change of temperature, and to other

hardships. A severe and prolonged attack of vomiting was the consequence, followed by distressing dyspepsia: this continued, and lapsed into a state of chronic gastrodynia, with pain over region of the pylorus, where, however, neither tumor nor hardness could be detected. Emaciation and great depression of health and spirits succeeded, and continued till the time of death.

The immediate cause of death was an overdose of purgative medicine. The bowels were habitually costive; no blood had ever been discharged by them.

On examination of the body, the only disease found was a pale ulcer of the mucous membrane of the stomach, close to but not involving the pyloric valve: its edges were round and thickened; it had not perforated the stomach, nor did the peritoneal coat adhere to any adjacent organ.

ACADEMY OF MEDICINE, PARIS.

Jan. 15, 1850.

PRESIDENT, M. ORFILA.

New Apparatus for Medicinal Inhalation—Discussion on Uterine Congestion.

M. CHARRIERE submitted an apparatus for the inhalation of vapours, possessing the following advantages—1. That of allowing the patient to perform both inspiration and expiration during its employment; 2. That of allowing the patient to perform only inspiration, and to expire without its use, if desired; 3. That the temperature of the vapours can be regulated at will; 4. That the vapours can by its means be directed upon an isolated part or organ.

M. HUGUIER addressed himself to the arguments of M. Velpeau on the identity of hypertrophy and *engorgement* of the uterus.

M. HUGUIER drew these distinctions:—

1. In *engorgement* there exists a complete anatomico-physiological condition. In hypertrophy there is simply an exuberance of the normal structure of the organ. In *engorgement* there is a certain degree of morbid anatomical change.

2. Engorgement is often the result of repeated attacks of acute inflammation at short intervals, or of chronic inflammation; both of these leave after their subsidence those morbid conditions which continue and increase long after all inflammation has disappeared. Simple hypertrophy of the uterus, as of other organs, occurs without inflammation, as the result of irritation or over action of an organ.

3. In *engorgement*, alterations of the colour, sensibility, and other physical pro-

perties and functions of the organ are produced, which are not met with in hypertrophy.

4. The course of the two affections differs: hypertrophy is permanent and uncomplicated; *engorgement* degenerates into, or becomes complicated with, other forms of disease, or subsides with altered conditions of the sexual organs.

5. The prognosis of the one disease is more serious than of the other. The treatment, also, is widely different; in the one it must be addressed to those functional derangements which gave rise to it; in the other, the treatment must rather be directed to the effects of the morbid condition.

M. HUGUIER further observed, that notwithstanding the points of resemblance which might exist between the two affections, the preceding distinctions, and the consideration of a great number of facts, established the existence of a morbid condition, intermediate between inflammation and hypertrophy, to which the name of *engorgement* is applied, and that several species of this condition can also be indicated: *e. g.*, according to previous lesions; inflammatory, sthenic, asthenic, mechanical; according to the nature of their cause; syphilitic, essential, darteuse, diphtheritic; and, according to the tissue principally affected, fungoid, cedematous, varicose. χ

SURGICAL SOCIETY OF PARIS.

Jan. 16, 1850.

PRESIDENT, M. DEGUISE, *père*.

On the Consequences of Tracheotomy.

M. GUERSANT related a case in which, after the operation of tracheotomy in croup, during deglutition alimentary matters were rejected by the aperture in the trachea. M. Guersant had met with this accident in many instances, and attributed it to a defective action of the epiglottis. He had the notes of forty operations of tracheotomy in croup; of these six were cured, and a seventh lived eleven days after the operation.

M. MICHON attributed the circumstance mentioned by M. Guersant to the changes produced in the mucous membrane, muscles, and cartilages of the pharynx, by the inflammation, by which the complete occlusion of the glottis is interfered with.

M. DEGUISE (junior) concurred in the opinion of M. Michon, and observed that he had himself met with the same effect, which disappeared as the inflammation subsided.

A short discussion took place on M.

Dupuytren's opinions of the effects of enlarged tonsils in the causation of disease.

M. GUERSANT continued his observations on the results of tracheotomy in croup, the failure of which he attributed principally to two causes—1. To the debilitation of the patient by early treatment; 2. To the want of sufficient care, subsequently to the operation, to prevent the admission of cold air and foreign bodies into the trachea.

M. FORGET inquired if M. Guersant could indicate the precise period at which recourse should be had to the operation.

M. GUERSANT answered, that if a rational and energetic, but *not antiphlogistic*, treatment had been adopted without relief, the operation should be resorted to. X

ROYAL INSTITUTION.

January 25, 1850.

On the Theory and Practice of the Manufacture of Sugar.

PROFESSOR BRANDE introduced this subject, by indicating the differences in the physical properties and chemical composition of the cane and grape sugar.

The most important points brought forward with reference to the manufacture of sugar were the formation of certain organic compounds by prolonged boiling, which Professor Brande provisionally denominated *melassic acids*; and the separation of these, together with the colouring matters, from the solution of sugar, previous to its crystallization: in other words, the difficulties which present themselves in the process of refining.

The Lecturer exhibited the production of the class of acid compounds both by boiling and by the action of sulphuric acid on sugar. Mr. Brande also demonstrated the construction of the vacuum pan, and the advantages which it offers in boiling the sugar at a low temperature without the formation of so large a quantity of the melassic acids, which are, of course, so much loss.

The Professor next adverted to a new process for the refining of sugar, recently introduced by Dr. Scoffern. This consists essentially in the separation of the acids, colouring matters, &c., by oxide of lead. For this purpose a solution of sub-acetate of lead is added to the solution of sugar; the melassates of lead are thrown down: any salt of lead which may remain in the solution of sugar is afterwards separated by a current of sulphurous acid gas passed through the syrup: any excess of sulphurous acid which the syrup may retain

is readily driven off by heat. The process of decolorization is effected by the use of charcoal. The solution of sugar is tested at certain times by sulphuretted hydrogen, to ascertain whether any lead be present therein.

The Lecturer concluded by showing the process of forming loaves of sugar.

A great variety of apparatus was exhibited in illustration of the several processes to which reference had been made by the Professor. X

Correspondence.

EDINBURGH CHILD BED MORTALITY.

[WE had intended that this controversy should end with the last letter inserted on the subject. We cannot, however, hesitate to allow Dr. Barnes to correct a misstatement in Mr. Carmichael's letter, as it throws an undeserved imputation upon Dr. Barnes's fair dealing with medical reports.]

SIR,—Disclaiming all desire to enter upon any controversy with the advocates for the administration of chloroform in natural labour, and therefore all desire to follow Mr. Carmichael through the several points he has urged in his letter to the *MEDICAL GAZETTE* of January 11th, I must still beg of you so far to forego your expressed intention to admit no answer to that letter, as to enable me to repel the charge of intentional unfairness which Mr. C. has brought against me, no doubt under a misapprehension.

Mr. C. says that "I *carefully omit to mention* that owing to the prevalence (of puerperal fever) the mortality in childbed in Edinburgh was unusually great in 1847 and 1848;" and further, "that I must have been quite familiar with the fact, because allusion is made to it in a paper from which I *professedly draw* my Edinburgh statistics, viz. Dr. Stark's Reports on the Mortality of Edinburgh and Leith."

If Mr. C. will turn to what I wrote on the subject, he will nowhere perceive that I professed to draw my Edinburgh statistics from the paper he refers to. I took the Edinburgh mortality from the monthly and yearly reports forwarded by Dr. Stark to the Registrar-General, and which Mr. Farr kindly permitted me to use. Had I been aware of the existence of any other documents more authentic, or containing fuller information, I should have resorted to them. In the reports forwarded to the Registrar-General *there is no reference to puerperal fever.* I led a note to my table. its

Mr. C.'s attention, to the following effect. "In Edinburgh the deaths from puerperal fever are not distinguished."

I confidently state, that I used the greatest care to render the comparison between the childbed mortality in London and Edinburgh fair and correct; and I am sure Mr. Carmichael will admit that I am not responsible for the deductions which other persons may draw from that comparison. I agree with the Editor of the *MEDICAL GAZETTE*, "that it does not appear that the alleged increase of deaths in the obstetric practice of Edinburgh was due to chloroform;" and nowhere have I said that it was.

But notwithstanding all the objections raised by Mr. C. to the accuracy of the Edinburgh mortality returns, and recognising as I do the public value of his inquiries as to this point, I do not think he has materially invalidated the general conclusion I did draw—viz. "that the childbed mortality of Edinburgh is higher than that of London."

To investigate and to remove the causes of this excess, and if possible to reverse the terms of the proposition, are duties which devolve upon the obstetric practitioners of Edinburgh.—I am, sir,

Your obedient servant,

ROBERT BARNES, M.D.

Gloucester Terrace, Hyde Park,
January 21st, 1850.

ON A PROBABLE DANGER ARISING FROM THE USE OF COD-LIVER OIL.

At a recent meeting of the Surgical Society of Ireland, Dr. Benson made the following statement regarding Cod-liver Oil:—

It was not to be expected that a remedy of so much power could be used with impunity in all cases. Having such efficacy in checking emaciation, in restoring the wasted flesh, and bringing back colour to the faded cheek, it might be anticipated that it would in some cases of phthisis occasion a congested condition of the lung, and even give a tendency or prove a predisposing cause to pneumonia; and this was, in fact, what he thought he had observed in some instances, and it was to this he begged the attention of the meeting.

It so happened that in almost every patient who died of phthisis under his care while using cod-liver oil, he found the lung congested and consolidated, not only in the neighbourhood of the tubercles, but through nearly the entire of both lungs. This morbid condition, it is true, is often met with where no oil has been used, but he was struck with the greater frequency of it in the post-mortems he had made where the oil was freely administered.—*Dublin Medical Press.*

Medical Intelligence.

SUSPECTED MURDER OF GEORGE PARKMAN, M.D.

THE only additional intelligence respecting the death of Dr. Parkman to be found in the American journals for January is contained in the following extract from the *Boston Medical and Surgical Journal*:—

Never has this community had a severer shock than is now agitating it. George Parkman, M.D., a very wealthy and well-known physician of this city, was unaccountably missing after Friday, Nov. 23d. To the astonishment of every one, on Friday evening, Nov. 30th, the remains of a human being, singularly mutilated, were found in and about the private apartments of Dr. John W. Webster, at the Medical College in Grove Street, some of the remains bearing evident marks of being partly burnt. Dr. Webster is professor of chemistry in Harvard University, and is extensively known as the lecturer on that branch of science in the Medical College in Boston, in which he has held the chair about twenty years. He is now in prison, and the public mind is in the highest state of excitement. As all the newspapers are filled with minute details of the developments at the College, we do not feel that it is necessary to repeat them. We will therefore only say, that Dr. Parkman was seen to enter the College on the day he was missed, but never seen to come out. Prof. Webster said that he had paid him a certain sum of money to discharge a mortgage, which was not discharged, nor can he exhibit a receipt for it. These circumstances have led to the horrible idea that the remains found in the professor's room were those of Dr. Parkman. It is singular, among other things, that Dr. Parkman generously gave the land, a few years since, on which the Medical College stands in which he is supposed to have been murdered.

Dr. Parkman had long been in the habit of occasionally employing some of his few leisure moments in preparing brief articles for this Journal. These were mostly condensed statements of medical facts, divested of every extraneous word or sentence. Three of these have been furnished for the present volume. The first, on page 122, was part of a letter to himself from a relative travelling in Europe; on page 180, a sketch of Philip Pinel; and, on page 203, some notice of the sickness and death of Dean Swift. His attention was always more particularly directed to the subject of insanity, and his most elaborate papers

have treated upon it. No. 16, Vol. 14, contains a really valuable paper by him on this topic, in which the murder of Johnson by the celebrated Earl Ferrers was referred to, and which cannot now be read without calling up the most dreadful ideas respecting his own probable fate. In No. 4, Vol. 23, is also another article on insanity from his pen. He had given us notice, a few days before his disappearance, that he should soon have a paper ready for the Journal, on the value of electricity in producing active defecation from the bowels. Prof. Webster has also, in former years, been a contributor to the Journal. He has been known as an author, and his last work, of general interest to science, was a revised edition of Liebig's Chemistry.

YELLOW FEVER IN CHARLESTON, S. C.

FOR the first time since 1839, yellow fever has prevailed in an epidemic form in Charleston. Its appearance was preceded by unusually hot weather during the latter part of the month of August. A violent thunder-storm—one of the severest we have ever known—accompanied by a heavy fall of rain, occurred on the first of September. This was succeeded by north-east winds and cool weather for a fortnight, in spite of which the disease spread slowly and steadily. The mortality has been as follows:—From occurrence of first case (Aug. 6th) to Sept. 8th, 7 deaths; for week ending Sept. 15th, 7; ending Sept. 22d, 17; ending Sept. 29th, 11; ending Oct. 6th, 18; ending Oct. 13th, 23; ending Oct. 20th, 13; ending Oct. 27th, 13: total deaths, 109.—*Charleston Medical Journal*.

SPIROMETER OBSERVATIONS.

DR. HUTCHINSON has shown that the quantity of air which a person in health can expire after a deep inspiration has a relation to the height of the individual. He states the average to be eight cubic inches of air for every inch of stature from five to six feet. Above this height the ratio increases. The average for men five feet six is about two hundred and twenty inches.

The following instance offers a variation:—

A man aged thirty-seven years breathes upwards of two hundred and eighty; how much more could not be determined by the spirometer employed, as its capacity did not exceed that quantity, and it was blown out of the reservoir. This individual is five feet five inches in height, and measures, from the external end of the clavicle to the lower margin of the ribs, eighteen inches. Circumference of thorax, across the nipples, thirty-eight inches when the chest is filled with air, and thirty-seven

after expiration; around the lower margin of the ribs, thirty-one inches after expiration, and thirty-four after a full inspiration. X

REMOVAL OF FOREIGN BODIES FROM THE EAR-PASSAGES.

MR. TOYNBEE, in a communication to the Provincial Journal, condemns the use of forceps or curettes, and says—"The instrument that I have always found successful in removing foreign bodies from the external auditory meatus without fear of producing inflammation, is a syringe, of capacity sufficient to hold two or three ounces of water. The plan of using a syringe in these cases has been often recommended, but I feel confident that it will not prove successful unless the syringe be of sufficient size to allow the water to be injected with considerable force. Forceps and other instruments are had recourse to by surgeons who have found that the foreign body is not moved by the use of a small syringe, the great fault of which is that sufficient force cannot be used to cause the water to pass between the foreign substance, when it is large and round, and the walls of the meatus; or, if the substance is heavy, an outward current powerful enough to carry it towards the orifice cannot be induced. Of the foreign bodies which I have recently removed from the external auditory meatus by means of the syringe, two consisted of a pea and a bead, both appearing, on examination with the speculum, to be closely surrounded by the membranous meatus; the third was a piece of slate pencil lying at the lower wall of the inner extremity of the tube, and in contact with the membrana tympani. I feel confident that an attempt to extract any of these substances by means of forceps or director would have been attended by injury to the meatus or membrana tympani, whereas each was removed by the use of a syringe for about three minutes.

DISPENSATION OF APPOINTMENTS IN THE ARMY AND NAVY.

WE extract the following curious piece of information from a contemporary. It may serve for an appendix in another letter on Medical Reform to the Lord Advocate.

In illustration of the *clannish* rule by which the Directors-General of the Medical Departments of the Army and Navy are governed, the following tabular analysis has been prepared. It is a really curious document, and shows respectively the comparative number of natives of England, Ireland, and Scotland, with their rank in the service, viz.—

Inspectors-General.	Dep. Inspectors-General.	Staff-Surgeons, 1st Class.	Staff-Surgeons, 2d Class.	Assistant Staff-Surgeons.
Scotch 3	Scotch 7	Scotch 21	Scotch 26	Scotch 61
Irish 2	Irish 3	Irish 10	Irish 14	Irish 10
English 0	English 2	English 4	English 10	English 6
	W. Indian . . 1			Colonists . . . 2

In addition to the above, we notice that the "*Blane Medal*," founded by the late Sir Gilbert Blane, which is awarded by the council of the College of Surgeons on the recommendation of the Director-General of the Medical Department of the Royal Navy, Sir William Burnett (another Scotchman), that eight out of ten are Archy McSycoophants, Campbells, and Macduffs.—*Lancet*.

PRESENT OF WAX MODELS TO THE HUNTERIAN MUSEUM OF THE ROYAL COLLEGE OF SURGEONS.

THE Hunterian Museum, founded by John Hunter, of whose executors it was purchased by Government and presented to the above institution, has just received a princely donation from Mr. Richard Owen, F.R.S., and Hunterian Professor to the College. This valuable and beautiful addition consists of a series of 12 highly-finished and apparently most accurate models in wax, of the natural size, or of parts highly magnified, of the entire anatomy of the electrical ray, or torpedo (*Torpedo Galvani*), prepared by Professor Calamai, the superintendent of the wax-model department in the Museum of Natural History at Florence, and who has prosecuted with much ability and success the anatomy of the torpedo, and has published the results of his dissections, which are so beautifully perpetuated in the models now in the Hunterian Museum. These magnificent preparations were ordered by his Imperial and Royal Highness the Grand Duke of Tuscany, expressly to be made for Professor Owen, after an interview with which the Professor was honoured during his visit to Florence in 1846, and are now by this distinguished naturalist presented to the Royal College of Surgeons.

ROYAL COLLEGE OF SURGEONS.

THE following gentlemen were admitted Members of the College at the last meeting of the Court of Examiners:—Watson Armorer, Newcastle-on-Tyne; Peter Ambrose Cotterell, Birmingham; Izaak Dobree Chipmell, De Beauvoir, Guernsey; William Charles Hills, London; John Lee Jardine, Brixton Hill, Surrey; James Keisan, Dublin; John Langford, St. Leonards at Sea, Sussex; James Cleife Lane, Grosmont, Monmouthshire; William Owen, Llanfair, Montgomeryshire; Charles O'Callaghan, Killarney, Kerry; Leonard William Sedgwick, Boroughbridge, Yorkshire; John Moore Swain, Long Clawson,

Leicestershire; James Taylor, Bolton, Lancashire. At the same meeting of the court, Mr. George Clarke passed his examination for naval surgeon.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, January 24th, 1850:—Samuel William North, York—Henry Tregelles Fox, Dunmow, Essex—Charles William Latham, London—James Hamilton Davies, as an assistant, Haverhill.

OBITUARY.

DR. W. R. CLANNY.

AT his residence, Bishopwearmouth, on the 10th inst., Wm. Reid Clanny, Esq., M.D., F.R.S.E., Physician Extraordinary to H.R.H. the late Duke of Sussex, and upwards of forty-five years Physician to the Bishopwearmouth Infirmary, inventor of a safety lamp, and an eminent contributor, in various branches of philosophy, to most of the leading publications of the day.

SAMUEL GOOD, ESQ.

On the 22d inst., in the London Road, Worcester, Samuel Good, Esq., one of the surgeons in ordinary to his Royal Highness Prince Albert, and formerly Surgeon-Major of the Scots Fusilier Guards.

MR. ROUSE.

Suddenly, on the 25th inst., Mr. Rouse, surgeon, of Walham Green, Fulham, aged 58.

ON THE PROPORTION OF AMMONIA IN ATMOSPHERIC AIR.

M. FRESENIUS, by passing the air through a dilute solution of hydrochloric acid, then adding bichloride of platinum, and weighing the resulting ammoniaco-chloride of platinum, has found that during the day-time 1,000,000 of air contains 0.098 of ammonia = 0.233 of carbonate of ammonia; and that during the night the proportions were 0.169 of ammonia = 0.474 of carbonate of ammonia. M. Fresenius, however, admits that more extended experiments are required for the complete determination of these points.—*Journal de Chimie Médicale*.

Selections from Journals.

ON EPIDEMIC DYSENTERY, AND ITS TREATMENT BY THE ENDERMIC EMPLOYMENT OF MORPHINE. BY DR. BERLAUD (D'OYE).

THE symptoms in a series of cases which Dr. Berlaud narrates were those of severe dysentery; having, however, some peculiar features.

The pain and the number of evacuations varied considerably. The danger of the patient was not in proportion to the frequency of the stools, or of the blood contained in these. Fever was regarded as a bad sign, since three out of four who died had fever.

An expectoration of red shreds was met with, seeming to denote that the mucous membrane of the throat was affected like that of the intestines.

Besides the patients, all other persons in the same house suffered from premonitory symptoms. Of eleven patients attacked with dysentery, four died. Of these eleven, only one was a female, although women nursed and tended the patients.

Dr. Berlaud having treated his cases with all the ordinary remedies, and having been disappointed in their effects, had recourse, with the most complete success, to the endermic mode of using morphine. Each application was followed by three or four hours of perfect ease. The mode of application of the morphine was that recommended by M. Troussseau. A portion of cuticle was raised by blistering, and the morphine sprinkled in powder over the surface. This was repeated on other portions of the skin in succession. This plan of treatment proved completely efficacious.

—*Gazette Médicale.*

X

CRYSTALS OF ANHYDROUS NITRIC ACID.

M. DEVILLE, by acting on nitrate of silver with dry chlorine, has succeeded in isolating anhydrous nitric acid in the form of colourless prismatic six-sided crystals with rhombic base. At degrees of temperature between 84° F. and 112° F. the crystals liquefy. The tension of their vapour is considerable at 50° F., whence their analysis is difficult, since, on exposure to the air, they immediately assume the gaseous form. Heat is evolved when the crystals are added to water, and they dissolve without discolouration or disengagement of gas. The process by which the crystals are obtained is complicated, and requiring very careful precautions.—*Journal de Chimie Médicale*, 1849.

X

CASE OF PSEUDO-MEMBRANOUS LARYNGITIS SUCCESSFULLY TREATED WITH NITRATE OF SILVER. BY DR. W. CHEW VAN BIBBER, OF BALTIMORE.

RECOVERIES from pseudo-membranous laryngitis are so rare that each is worthy of being remembered. The following case is interesting, on account of the urgency of the symptoms, the unmistakable character of the disease, and the promptitude of relief:

Hugh Brady, aged 3 years and 2 months, was observed on the 11th of January to have catarrh, with cough and hoarseness. On the 18th, Dr. J. L. Webster was called: found him with high fever, difficult respiration, ringing, croupy cough, voice a whisper, throat inflamed, tonsils enlarged; no membranous exudation on tonsils or fauces. 14th.—Cauterized the throat with water ʒi.; nit. argent. gr. xiv. Prescribed calomel and emetics, with a blister on the sternum. This treatment was continued until I saw him in consultation, on the 23d, the twelfth day of the disease.

Symptoms.—Respiration 32, forced; alæ nasi expanded, and mouth open; loud blowing and hissing sound in inspiration and expiration, but louder in inspiration; head thrown back, buried deep in the pillow; laborious heaving of chest; countenance of fearful anxiety; eyes open and glassy; pupils contracted; profuse perspiration over head, chest, and upper extremities; legs and feet dry and hot; pulse full and fast, 140. Sibilant and mucous rales on both sides; if any other sounds existed, they were masked by the loud blowing sounds in the larynx and trachea. Tongue and mouth parched and dry. No false membrane could be discovered on the throat by the red light of a candle. Having acquired some dexterity with the probang, we attempted to pass Dr. Green's instrument into the larynx. Saw the epiglottis erect, but failed to get the sponge entirely through the cartilages. From the violent expulsive efforts produced, we concluded (which is no doubt true) a small portion of it dropped into the trachea. In a few moments there were expelled by these efforts many fragments of false membrane, the longest of which was nearly two inches, ragged, and detaching itself in water; was light-coloured and tough; we attempted to pass it again, and a third time with the same result. At the last attempt there was no more false membrane expelled.

In half an hour an emetic of Sulph. Cupri. Continue calomel, with mercurial plaster to the throat. 24th.—No better; pulse quicker and more contracted. Used probang, with the same results as before, three times in succession; the solution being Aq. ʒi.; Nit. Arg. (Crys.) ʒj. An emetic

of alum 3j. repeated. Suspend calomel. 25th.—Better. 26th.—Greatly relieved. Laryngeal stridulous sound almost gone; loud mucous and sonorous rale in both lungs, particularly the right. Profuse perspiration, and urine scanty. R. Mur. Ammon. gr. iij.; Tinct. Digitalis, Mss.; Ext. Hyoscyami, gr. 4; every two hours in solution. Sponge the surface with a solution of salt and water, and frictions with warm flannel. 27th.—Better in every respect; and from this time he recovered.

It has been said that "physicians have been tinkering at the constitution for two thousand years, and but two specifics are recognised, viz. mercury and sulphur." That the nitrate of silver may prove, when properly applied, a specific in pseudo-membranous laryngitis, I sincerely hope, and from the effects I have observed from it when applied to false membrane appearing on the tonsils and pharynx, I think it not improbable.—*American Journal of the Medical Sciences.*

BOOKS & PERIODICALS RECEIVED.

A Treatise on the Inflammations of the Eyeball. By Arthur Jacob, M.D.

The Vegetarian Messenger, a Quarterly Magazine on the Food of Man, &c. No. 1, January.

Annales d'Hygiène Publique et de Médecine Légale. Janvier 1850.

Comptes Rendus. No. 27, Dec. 31, 1849; No. 1, Janvier 7, 1850.

On the Detection and Treatment of Intra-uterine Polypi. By J. Y. Simpson, M.D. Pathology of the Human Eye. By John Dalrymple. Fasc. 3 and 4.

Surgical Anatomy. By Joseph MacLise. Fasc. 4 and 5.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Jan. 26.

BIRTHS.		DEATHS.	
Males....	766	Males....	508
Females..	728	Females..	526
	1494		1034

CAUSES OF DEATH.

ALL CAUSES	1034
SPECIFIED CAUSES	1018
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	158
<i>Sporadic Diseases, viz.—</i>	
2. Dropsy, Cancer, &c.	45
3. Brain, Spinal Marrow, Nerves, and Senses	120
4. Heart and Bloodvessels.....	32
5. Lungs and organs of Respiration	252
6. Stomach, Liver, &c.	64
7. Diseases of the Kidneys, &c.	9
8. Childbirth, Diseases of Uterus, &c.	8
9. Rheumatism, Diseases of Bones, Joints, &c.	7
10. Skin.....	3
11. Old Age.....	51
12. Sudden Deaths.....	12
13. Violence, Privation, Cold, &c....	28

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	8	Convulsions.....	38
Measles.....	28	Bronchitis.....	121
Scarlatina.....	16	Pneumonia.....	78
Whooping-cough.....	27	Phthisis.....	128
Diarrhoea.....	14	Lungs.....	6
Cholera.....	0	Teething.....	9
Typhus.....	27	Stomach.....	11
Dropsy.....	16	Liver.....	17
Hydrocephalus.....	26	Childbirth.....	5
Apoplexy.....	26	Uterus.....	3
Paralysis.....	34		

REMARKS.—The total number of deaths was 50 below the average of the fourth week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 30.05

Thermometer..... 35.5

Self-registering do. Max. 0.0 Min. 15.

a From 12 observations daily. b Sun.

RAIN, in inches, .32.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was half a degree below the mean of the month.

NOTICES TO CORRESPONDENTS.

Dr. De Roos and M.R.C.S.—We know nothing of Dr. De Roos or his book. The work has not been reviewed in the Medical Gazette, and any pretended quotation is therefore a fraud. There are no legal means that we are aware of for punishing quacks, who make use of the names of medical journals. We know of no reason why Dr. De Roos should have selected the MEDICAL GAZETTE, except that he believed it to be the most respectable of the medical journals, and that its name was therefore more likely to carry weight with the public.

Mr. Bromley.—We have made inquiry, and find that the extra-charge is strictly in accordance with the rules of University College. To become a perpetual pupil by paying the difference, a student must make this arrangement before the expiry of the sessional course for which he has entered. This was done in Chemistry, and therefore the payment of the difference in this case was correct. In Medicine and Surgery, however, two years had elapsed before the perpetual ticket was applied for: hence it did not fall within the rule which applied to the Chemical course. Different schools have different regulations on this subject; but we know that in several, a benefit is given to a student who changes his sessional for a perpetual ticket within six or twelve months, which is denied to him if he allow that time to elapse. We have received the report of the Liverpool Medical and Pathological Society. It shall appear in the following number.

The communications of Dr. Dick, Mr. Trayer, and Mr. Smith, are unavoidably postponed. Assistant-Surgeon Moore, Gwalior Contingent.—We are obliged to our correspondent for the papers dated Nullatpoor, 8th Dec. 1849, which have safely come to hand. They will have early insertion, and copies of those numbers of the journal which contain them will be forwarded to India.

Communications have been received from Dr. Soltau, Dr. P. Murphy, Mr. R. Nunn, and Mr. J. F. Wood. These will be inserted with as little delay as possible.

Mr. W. Smith.—Inquiry shall be made.

Lectures.

LECTURES
ON

LACTATION, AND THE DISORDERS
INCIDENT TO THE PUERPERAL
STATE.

By E. W. MURPHY, M.D.

Professor of Midwifery, &c. in University
College, London.

CONVALESCENCE AFTER PARTURITION.

State of the patient after delivery—Stage of depression—Interval between parturition and lactation—Errors in management immediately after delivery—Period of reaction—Formation of milk—Disturbing causes, local and constitutional—Excessive flow of milk—its effects and management—Diminished flow of milk—treatment—Sore nipples—Depressed nipples—Mode of preventing the secretion of milk—Condition of the uterus after delivery—After-pains—causes and management—Coagula—Flatus—Uterine neuralgia—Lochia—Changes in their character—Indications—Importance of attention to purulent discharges—Lacerations of perinaeum—Treatment.

GENTLEMEN,—Hitherto our attention has been directed to the phenomena that presented themselves during the development and birth of a new being. We observed the dormant uterus roused into activity, and exerting a powerful influence over all the vital functions; becoming, as it were, a centre of action to which all the energies of the constitution were directed. When the ovum was matured, and the child prepared to leave its temporary resting-place, we witnessed a new series of phenomena in the struggle between the enormous expulsive power of the uterus and the resistance opposed to it. The manner in which the balance was preserved between these opposing forces, the mechanism by which difficulties were overcome, and the high degree of constitutional disturbance that sometimes was excited by those efforts, occupied, and no doubt interested you. In the whole of these phenomena you might perceive a progressive series of operations, of which the last and greatest was parturition: the powers of the female constitution reached their climax of effort in the delivery of the child. We have now to consider the changes that take place when that object is accomplished,—when the cause of so much constitutional excitement is suddenly removed. The activity of the

nervous and circulating systems, that were at their maximum of intensity, is now reduced to a minimum. The pulse sinks; a rigor may be observed more or less distinctly: the patient either complains of feeling cold or is actually shivering; she experiences also a certain amount of depression; she feels exhausted, and occasionally a slight temporary wandering gives more distinct evidence of the exhaustion of nervous power. The first twelve hours that elapse after the delivery of the parturient woman is essentially a period of repose; and if, by good management, the patient is left undisturbed during that or even a much shorter interval, if she obtain a sound and refreshing sleep, it is surprising the rapidity with which the constitution is restored: the mother has forgotten all her sorrows, is cheerful, disposed to talk, and, so far as her own feelings are concerned, she could get up and go about as well as before her delivery. In the next interval—say twenty-four hours—a slight change may be observed: a new function, that of lactation, is becoming active, and its influence on the vital functions is manifested sometimes very distinctly. The circulation, that before was below par, now rises again to the inflammatory standard. The paroxysm of a kind of natural fever is present, going through its stages of rigor, interval and sudor. There is a certain amount of thirst, and perhaps slight headache. If there be no interruption to the healthy fulfilment of this function, these symptoms disappear as the full secretion of milk is established, and no further constitutional change may be observed. If we turn our attention from lactation to the uterus,—from functional to local symptoms,—we here also observe appearances that mark important changes going forward. The uterus is now preparing to resume its size previous to conception, to return again to its ordinary function of menstruation, and withdraw itself from that sphere of nutrient activity in which it had been engaged. We have therefore to consider the volume of the organ, the permanent contraction of its fibres, the rapidity of interstitial absorption that takes place. The internal surface of the uterus is also to be observed, especially that part to which the placenta had been applied,—well compared by Cruveilhier to a large open wound. From this surface a discharge takes place, at first grumous, then greenish yellow, thick and oleaginous, and lastly thin and serous, when about the tenth or twelfth day it ultimately disappears. The wound is then healed, and the mucous membrane is nearly restored to its original character. This outline of what takes place between the period of de-

livery and convalescence is sufficient to render intelligible the principles to which we should adhere in the management of the patient, as well as the source of those derangements that may interrupt, if not prevent, her recovery. We may divide the progress of convalescence into three periods: first, the interval between parturition and lactation,—between the birth of the child and the commencing secretion of milk; secondly, the period during which the function of lactation rises to its highest point of activity, until it is fully established; and, thirdly, the period occupied in restoring the uterus to its original condition previous to conception. Many interruptions to the proper fulfilment of these vital actions occur that give rise to every variety of derangement, each of which become objects of our attention and treatment, and therefore require to be carefully studied.

In the *first period* immediately after delivery, the first cause of disturbance is generally found in the errors of those who are immediately about the patient. We have described it as a period of constitutional depression after a very exalted degree of functional activity, one in which the most perfect repose of the system is required, and where, if sleep be procured, it is no poetic fantasy to call it Nature's sweet restorer. You readily, therefore, understand the mischief that may result if this be interfered with. If the patient is allowed no repose, and is kept in a constant state of excitement after her delivery, you can perceive why it is that the accoucheur has to complain sometimes of the well-intentioned but too officious kindness of friends and relations, when he finds, on his visit, that his patient has not slept, that her pulse is quick, that she complains perhaps of some headache, and is thirsty. These premonitors of a more decided febrile paroxysm are unnoticed by the bystanders or the ignorant attendant, but cause, too often justly, the greatest alarm to the experienced practitioner: he knows, when reaction takes place, that along with it these unfavourable precursors will develop themselves more perfectly, and place his patient in a very different position from that which she now seems to enjoy. He can foresee impending danger in that which is only looked upon as a temporary inconvenience by those who have not experience to guide them. Besides keeping the patient excited by talking to her, or, what is the same thing, by having her room full of talkers, another error in management may be committed of a perfectly opposite character: the nurse may very judiciously expel all intruders, and so far succeed in keeping her patient quiet, who would

enjoy the repose necessary for her, if, unfortunately, the nurse herself had not a strong prejudice in favour of making her "clean and comfortable:" that is, she is not satisfied with the temporary arrangement of the bed that had been made on the birth of the child; all the rolled sheets and bed-clothes must be removed, her patient's dress must be changed; and, after all this is done, the nurse consoles herself in the belief that she must sleep comfortably. But in every step of this process there is danger, either immediate or remote. The patient cannot be moved about in this way without disturbing the abdominal bandage that was to secure and support the uterus. If the patient leave the horizontal posture,—and she is often allowed to sit bolt upright,—the blood again accumulates in the uterine veins, and the surrounding fibres readily yield to this distension when the stimulus of external and equable pressure which the bandage supplied is removed. Blood is consequently poured into the cavity of the uterus, which, if it go no farther, exposes the patient to a very severe attack of after-pains; but it may flow away, and produce a most violent and dangerous flooding. Your patient is thus exposed to the risk of her life at a time when every moment is of the highest value, and you are probably an hour's distance from her. Or, again, if the patient escape this serious accident, another and an equally unpleasant derangement may be induced by the same cause. Delicate women are much more susceptible of nervous irritation at this than at any other period. If their rest be disturbed, or their sleep put astray, they remain wakeful and unfreshed; presently the senses become more than usually excited; the noise of their infant, although from another apartment, disturbs them; light is exceedingly unpleasant to them: nevertheless, although the nurse carefully darkens the room and closes the bed-curtains, the patient does not sleep; even if she should doze, it is but momentary,—the slightest whispering awakes her. After some hours she complains of headache, and just as the lactal secretion is becoming active, it is arrested by the presence of an irregular nervous fever; rigors occur at unequal intervals; headache is increased; the pulse is frequent and irregular; and sometimes delirium may be observed. A derangement of this kind may not be subdued for weeks, and may have its origin in no other cause than a little want of knowledge in the management of the patient immediately after her delivery. I have known a patient drawn down to the bottom of the bed, then up again, now to one side, then to another, in this process of changing the bed-clothes, who

afterwards presented a most alarming train of nervous symptoms that we feared might terminate in confirmed mania; and all this because the nurse insisted on making her "comfortable." The same evil may be produced in a different manner, by applying the child to the breast before there is any milk in it. Women who have given birth to their first child are slower in the secretion of milk than those who have had several children; and it sometimes happens, in obedience to a popular rule, that the child is applied to the breast as soon after delivery as it can be prepared for the purpose. When the woman is strong and healthy the practice is salutary, but if of an irritable temperament it is very mischievous; no milk being secreted the child soon becomes fretful, and the over-anxious mother equally so: several attempts are made to have the child take the breast, which are fruitless, the child cries, the mother becomes impatient, sits up in bed, and after many unsuccessful efforts is obliged to resign from mere exhaustion. A scene like this often ushers in a train of most serious and troublesome symptoms, that have sometimes ended also in puerperal mania. Too much excitement is not the only risk to which the patient is exposed during this interval. Errors in diet, also, may be very easily committed. We have stated to you that after the patient has had a refreshing sleep she feels perfectly well: she can eat and enjoy whatever may be given to her. There is, therefore, the greatest possible temptation to allow her to indulge in improper food: this mistake is the more likely to be committed because no ill consequence immediately follows the indiscretion, nor will the mischief become apparent until reaction sets in; but when the pulse begins to increase, and the milk to form, the natural febrile paroxysm is superseded by one of a more serious character, or if there be the least tendency to inflammation, it will show itself in a most aggravated form, because of the activity of an over-excited circulation.

For these reasons you will perceive the importance of securing to your patient undisturbed repose after her delivery. If she be of an irritable temperament an anodyne may be advisable for this purpose: you will find the combination of *Liq. Opii sedativus* with the *æthers*, sulphuric ether, Hoffman's liquor, &c. &c., very useful. When this important object is gained, caution is necessary to avoid any indiscretion in diet. Toast and tea, barley-water, gruel, are examples of the class of dietetics to which she must be confined. In plethoric habits a mild aperient on the day following delivery would also be serviceable to diminish the degree of reaction.

The second period is marked by an increase in the force and frequency of the pulse,—a slight rigor, some thirst, and perhaps slight headache: the breasts are becoming distended. If the previous management of your patient has been judicious, and no morbid causes of derangement are in action, she will pass safely over this hazardous period. The distension of the breasts, and the natural fever that accompanies it, are relieved chiefly by the child. When the milk flows freely the febrile symptoms subside, and the function of lactation is established. But a very slight cause will derange this natural process. Improper food, for instance, is a frequent source of disturbance; reaction may become excessive. In some cases the patient has a severe rigor, followed by profuse perspiration—the milk fever of authors. In other instances, the formation of milk is too rapid, although not accompanied by such marked symptoms of fever: the breasts, however, are tensely distended and painful, and presenting to the infant a firm unyielding surface: it cannot grasp the nipple sufficiently to fulfil its duty of suction, the mammae are not relieved, and the danger of local inflammation at once presents itself. In a third class of cases the lactal secretion may be suspended or suppressed,—a most ominous symptom, because it indicates a disordered action of a much more serious character than either of the preceding. The excited circulation is drawn towards some other centre than the mammae, and the absence of milk is only the precursor of some deeper-seated inflammation, if not of puerperal fever itself. Thus you can understand the reason why so much caution is necessary previous to lactation, and why the experienced practitioner is so solicitous that this function be safely established.

If the child be healthy, and able to draw the breast—if the mother be properly managed previously—this object is generally successfully accomplished, and the fulfilment of a duty the most grateful to the female mind will rapidly promote your patient's restoration to perfect health. But how many drawbacks, independently of those already alluded to, will prevent this? Both local and constitutional causes may throw impediments in the way of your success. The nipple may be ill formed, too small or too large, or perhaps flattened by the fashionable corset so completely as to form a depression in place of a prominence. The child, therefore, cannot seize it. Or it may happen that the extremely delicate integument that covers this erectile structure is very irritable and easily inflamed, consequently it will not yield to the traction of the child: it gives way at the base of the nipples, fissures are the result, that

bled readily, and in place of a comfort and enjoyment, the nursing of the child becomes to the mother the greatest source of anguish and distress. Again, you will meet with cases where there is nothing of the kind; the breasts and nipples are well formed, nevertheless the milk will not flow, because the fine lacteal ducts are not free to transmit it. They are plugged with a thick tenacious secretion that the child has not sufficient suction-power to extract and remove. All these are merely local causes that interfere with lactation; but the impediment may exist in the constitution of the patient. We have already alluded to excessive reaction, the milk being secreted more abundantly than the child can manage. The constitution may, however, be in a very opposite condition to this: there is scarcely any reaction, the milk is secreted scantily, and what is extracted contains but little nutrition; the infant is, therefore, never satisfied. After having obtained what it can it may sleep, exhausted by its efforts to draw the breast; it is only a momentary dose, it soon wakes up, becomes feverish, constantly crying, and ravenously hungry: the mother has no further supply, her very anxiety contributing to arrest the secretion, and thus difficulties of no ordinary character oppose themselves to your wishes. There are also certain constitutions where there is no deficiency of milk in the breasts,—the fault is not in the quantity but in the quality; the milk is abundant but does not satisfy the child, or possibly it may produce a considerable amount of irritation: the child has scarcely taken a sufficiency when it is again ejected from the stomach, or if this precaution of Nature should not take place, there is every evidence of irritation in its passage along the intestines; an exhausting diarrhoea may place the infant in extreme danger of its life, or it may be exposed to all the tortures of colic; its wild screams, that cannot be appeased, proving the agony that it is enduring. Thus you may perceive why it is that this second period is of such critical importance to your patient's health, and such a source of anxiety to the practitioner. You may also learn that, although as a general rule it is most desirable that every mother should nurse her child, there are many, too many, exceptions where this grateful office cannot be fulfilled, and where this duty must be delegated reluctantly to another, or the infant be supported by artificial imitations of its natural food.

In the various preparations that are offered as substitutes for milk, and in the hard names that are given them, there is a culinary skill displayed that almost rivals Soyer himself. Farinaceous food, tops and bottoms, and tous les mois, are only a

small part of the delicacies meant to supersede the bland and nutritious fluid that nature designed for the infant stomach. Like other delicacies, also, they frequently excite a considerable amount of disturbance in the digestive organs. We are not, however, about to discuss the management of infants, but for the mother's sake it would be desirable to avoid these sources of irritation, and if she cannot herself nurse, to give the child in charge to the best nurse you can find for it.

In the management of these cases, we shall consider first the constitutional, and then the local causes.

When the flow of milk is excessive we have two objects to accomplish—to reduce the force of the general circulation, and to prevent the effects of local distension. The former is best carried out by nauseating doses of tartarized antimony, and also by the saline aperients: both may be combined. The latter is efficiently relieved by warm fomentations, skilfully managed so as to maintain an equable temperature around the distended breast to that degree which is most grateful to the patient. Along with this, gentle frictions with warm oil over the surface are useful in promoting absorption of the excess of milk. When the distension, and consequent irritation, is relieved, the milk that had been arrested will frequently flow quite freely: if it be slow in doing so the breast-pump may be used with advantage; or, what is still better if practicable, another child may be applied to the breast, older and stronger than the infant, who will soon reduce the distension. If it should happen that the lacteal ducts are obstructed, even this method may fail, because a more perfect exhaustion is required to free them. For this purpose women are frequently employed “to draw the breast-strings,” as it is called, which they generally do very efficiently; their stronger power of suction removes these plugs, and the milk then flows without difficulty. As soon as this excessive distension is overcome in the first instance, it does not generally return, if caution be used in the diet of the patient, and aperients are given.

When the flow of milk is deficient you have a far more difficult case to manage, because the desire of the mother to nurse her infant is too frequently strong in proportion to her inability to do so. She is unwilling to resign her little charge to the care of another, and you are called upon to prevent this necessity. In this dilemma it is generally advisable to feed the infant artificially, through a sucking-bottle, so as to satisfy it, and prevent its restlessness. It may then be given to the mother at longer intervals than usual, twice perhaps in the

day, and once at night, so as to allow the milk that is slowly secreted to accumulate. The artificial food of the infant should approach as near to human milk as possible. If expense be no object, asses' milk is the best to give it. If otherwise, cows' milk may be diluted with water, or very thin barley-water, in the proportion of two parts of milk to one of water, or the curds of cows' milk may be removed by rennet, making rennet-whey; some sugar must be added, because cows' milk contains more curd and less sugar than human milk. Your patient will require a more nutritious diet than can usually be given after parturition; even stimulants are sometimes necessary: broth or soup may be given, and, with caution, warm negus. It is here that the virtues of caudle shine so conspicuously. It is very essential, also, that the mother be secured sufficient rest. These patients are particularly restless; an anodyne is therefore frequently required. The combination of camphor with opium or morphia, ether or spirits of ammonia with Liq. Opii Sed., will be found useful; and especially having perfect silence in the lying-in chamber: the noise of the infant, or even the whisperings of the nurse, are sure to arouse the patient, and if so there is a great risk that the anodyne may act only as a stimulant, and keep her awake the whole night. Recollect, in this treatment of your patient by good diet, stimulants, and anodynes, that the bowels are very likely to be locked up if you neglect them, and if so there is great risk of further derangement. Purgatives are, therefore, necessary, but not of the hydragogue class. Castor oil may be given; the aloes and myrrh pill, or any of the warm aperients. Enemata are highly serviceable, if the intestines are sluggish: the foetid enema, with or without turpentine, will be found useful, and I have occasionally derived advantage by giving at the same time the preparations of iron. The sesquioxide of iron, with the bitartrate of potash, may be given in an electuary sometimes with great benefit. By such means you may possibly succeed in enabling your patient to nurse; but as it is very doubtful, the strictest attention should be given to any symptom that would indicate constitutional exhaustion: headache, or neuralgic pains after nursing, watchfulness, irritability of temper, loss of appetite, any or all, may result from inability to maintain the function of lactation. Their appearance should be carefully observed, and considered sufficient to prohibit any further attempts. Of course, if the milk disagree with the infant, this is equally an objection: under such circumstances, however, the mother will much more willingly resign her office than when the ques-

tion only concerns her own strength of constitution.

The local cause that chiefly interferes with nursing, is the extreme tenderness of the nipple, the fissures, or "sore nipples," that are the result of inflammation. If attention be paid to the breasts before parturition, if the active capillary circulation about the nipples be controlled by astringents, weak brandy, tinct. of myrrh, and such like, being daily applied to them, there is less risk of accidents afterwards. This process of "hardening the nipples," as it is called, is often quite successful. It may, however, fail, or may not have been tried. As soon as the child is applied to the breast it causes great pain: inflammation follows, and a fissure is the consequence. From the moment this happens your patient's miseries begin: every time the child is applied the wound is opened and bleeds, the inflammation increases, the nipple swells and becomes painful, even when the child is not drawing it; but the pain is intolerable when it does so; and thus a very slight inflammation in the commencement may be so aggravated as to require weeks before it is quite subdued. The treatment of sore nipples is the treatment of simple inflammation; and the first and most essential point to effect is the prevention of the fissure. It is here that the intelligence of the nurse is of the most assistance to you. It is not usual for the practitioner to examine the nipples of his patient from day to day, although there is no reason why he should not do so if he has the least reason to suspect inflammation; but it is the nurse's duty to apply the child to the breast; she has the opportunity of daily, or hourly observation: if there be any great pain and unusual swelling and redness of the nipple, she is the first to perceive it, and may give timely notice to prevent the lesion that otherwise would take place. If, therefore, the nurse be intelligent, you are informed of what is the condition of the nipple, and in this first stage a mild astringent may arrest it. I have found that alum whey as a lotion is useful; the curd that is thrown down may be applied as a poultice to the nipple; the child should be applied to it as seldom as possible, and before doing so it would be well to guard the nipple previously with a circular piece of adhesive skin, having a hole in the centre, just sufficient to leave the orifices of the lactal ducts uncovered. This will diminish the irritation of the infant's gums, and render the operation of nursing more tolerable: a fresh poultice may afterwards be applied, and thus the fissure prevented. Other astringents are also used with benefit. Tinct. of catechu, kino, myrrh, borax, may be applied in solution with advantage. If, however, the

fissure take place, and the nipples be excoriated, the child should not be put to the breast. A broad bandage may be applied, and the breast from time to time gently rubbed with warm oil; the milk will thus flow freely, and over-distension be avoided; the tendency to inflammation being also subdued, the fissures will more readily heal: but in order to hasten it, nitrate of silver may be used in solution, in the proportion of ten grains to the ounce: a slight eschar is formed, which, when it separates, leaves a sound cuticle. There are many contrivances under the name of nipple shields, which are used in these cases, all of which are intended to enable the mother to nurse notwithstanding the excoriation. In other words, the child is to draw the nipple through the shield, which it is supposed prevents all irritation. Very fortunately, in most instances, the infant either cannot or will not suck in this ingenious manner, and therefore they are so far useless; but if it could, so far from preventing irritation, it would increase it considerably: the act of suction still opens the wound, and draws it against the inner surface of the shield, which certainly does not contribute to allay the irritation. The only use of such instruments is to guard the nipple from undue pressure or irritation afterwards; and when it is not greatly inflamed, a nipple shield is serviceable in preventing irritation from the dress, but when much inflammation is present, they should never be employed. *Depressed nipples* are extremely troublesome, and render the chance of nursing almost hopeless. They may be drawn out by the breast-pump so as to enable a strong infant to seize and to maintain its grasp, but they more frequently fail to do so: the nipple gradually falls back into its former place, while the infant is moving about its mouth to seize it. Such cases as these, as well as where the nipples are ill-formed, oblige the practitioner to forbid the reluctant mother making any further attempts to nurse her child. The secretion of milk must, therefore, be prevented. The mode of doing so varies according to the constitution of the patient; if of a full plethoric habit, the saline purgatives, with nauseating doses of tartarized antimony, may be given with advantage; some milk should be drawn from the breasts, and a bandage applied over them, so as to maintain a firm and equable pressure, and thus promote absorption of the remainder: if there be much distension, warm fomentations and warm frictions will be found extremely serviceable. Delicate women, or those in whom the circulation is not very active, do not require very strong aperients nor tartarized antimony. Sometimes cold applications, as the acetate of lead lotion,

spirit lotion, or if you please eau de Cologne, will be found sufficient for the purpose, a broad bandage being applied as in the former case. If not, a mild aperient, the potassio-tart. of potass, for instance, along with a low diet, will certainly succeed.

Let us now turn from lactation to the uterus; from the observation of the second to the *third period* that we have spoken of. It is necessary that you should have a clear apprehension of the condition of the uterus now from what it was before the delivery of the child. First, the *contraction* of the uterine fibres is now becoming permanent, and not unlike the rigor mortis: a state of permanent contraction is the evidence that their functions have ceased. Secondly, *absorption* is going forward with unusual rapidity. In ten or twelve days the uterus is reduced to one-half or one-third of its size after delivery. Thirdly, the *mucous surface* is undergoing equally rapid changes; the residue of the ovum is being thrown off, the extremities of the large vessels, that project from the surface where the placenta had been attached, are again shrinking to their former size, and the tide of blood that for so many months had been flowing towards this membrane, is now ebbing fast away from it. Fourthly, the *vagina* is also contracting itself with great force, and the abundant secretion that had been flowing from it is now gradually ceasing and returning to its original state. We have, therefore, to consider under these several heads the symptoms that present themselves while this change is going forward, especially those that require our aid in the way of treatment.

After-pains frequently present themselves while the uterus is contracting: they are generally severe, and depend upon different causes. They also occur more frequently with women who have had many children, than those who have given birth to their first-born. *Coagula* collecting in the uterus very commonly cause after-pains: blood when poured slowly into the cavity of the uterus coagulates, distends the parietes of the uterus, and excites spasmodic contractions. If this happens soon after delivery, the patient experiences pains as severe as labour pains: the agony sometimes endured is even greater than ordinary labour pains, and relief is urgently called for. In some instances this may be promptly afforded by using a steady pressure over the fundus of the uterus; the irritation excites a more powerful contraction; the coagulum is expelled, and the patient is relieved. This method, however, can only be adopted within from six or eight hours after delivery, so long as the alternate contraction and relaxation of the uterus has not altogether ceased: the contracted fibres of

the cervix and lower portion of the body will then yield to the more powerful action of the fundus, and allow the clot to pass. But at a later period this is not the case: the permanent contraction of these fibres cannot thus be overcome, and if too much irritation be used, inflammation of the uterus may be the result. When this period has passed, therefore, it is better not to make such attempts, but rather to endeavour to effect the same object in a different manner. For instance, a warm stimulant cathartic enema often does so; the action of the intestines is excited, and by sympathy the action of the uterus; the same straining efforts that expel the feces expel the clot, and relief is experienced soon after the motion; if not, a full anodyne, in combination with ether, and the local application of hot fomentations, will generally succeed. *Flatus* in the intestines also gives rise to severe after-pains. This cause may generally be recognized and distinguished from the former by a careful examination of the abdomen. When coagula are present, the uterus is generally large, prominent, and exceedingly painful on pressure; every other part of the abdomen is free from pain, and generally soft, if not flaccid; but when *flatus* is the cause, the abdomen is tympanitic: the uterus cannot be felt, and the slightest touch gives intense pain. This very character, however, is a valuable means of distinguishing the pains so produced from those of inflammation. A slight pressure causes great pain; but if it be increased, the pain diminishes until it quite disappears: if after this the hand be suddenly withdrawn from the abdomen, the pain instantly returns with increased violence, so that I have known the patient scream with the agony this simple act produces. When inflammation is present, which is also accompanied by tympanitis, the greater the pressure the greater the pain.

The best remedy for these cases, I think, is turpentine. Three drachms of turpentine, and the same of castor-oil, may be given by the mouth, or a terebinthinate enema may be administered; and I have observed that the patient generally obtains relief before it takes any purgative effect, as if the turpentine acted as a sedative. If the pains continue after the bowels are relieved, the diffusible stimulants, ether or ammonia, with opium, will generally disperse them.

Both these causes of after-pains come into operation most frequently with women who have had many children; and for an obvious reason. The muscles of the abdomen have been so weakened by frequent pregnancies that they give no support to the intestines when the uterus leaves the abdomen; consequently, they become over-

distended with air, and tormina are the result; so also the uterus is deprived of that equable pressure that it is so necessary to maintain. It yields more readily to the distension of coagula; and, in place of expelling them, allows them to accumulate, and produce after-pains. Another kind of after-pain, however, is occasionally observed, that may happen after a first labour just as well as any other.

Neuralgic pains of the uterus sometimes give arise to very severe suffering after delivery. This cause may be distinguished from either of the former by the natural feel of the abdomen. It is soft and free from pain; and by the size of the uterus, which is not at all increased. It feels unusually firm under the hand, and is exceedingly painful when pressed upon. We have applied to them the term "*neuralgic*" as best expressing the character of the pain, but we would not wish to imply by this term an essentially nervous affection; on the contrary, we are rather disposed to look upon it as a form of uterine inflammation, very different certainly from those forms that occur after parturition, and that are more commonly described, but still a variety that is well worthy of attention. During pregnancy it is met with, and there receives the name of rheumatism of the uterus. In the unimpregnated uterus it is found in a form of dysmenorrhœa. The inflammation is essentially chronic, and only rendered acute when an increased flow of blood is determined towards the uterus. Its seat is in the fibrous structure. Its effect on the uterus, whether it ends in resolution or leads to any morbid disorganization of structure, remains as yet among the arcana of obstetric science. They can only be recorded by the accurate observation of such cases, so as to trace out their history. It would be desirable to know whether abortions are more frequent in such cases, or retentions of the placenta from adhesion. Have ruptures of the uterus been preceded by such symptoms? It is highly important to determine the relation between these serious results and chronic inflammation of the uterus.

The treatment of these after-pains differs from either of the former; in fact, you are called upon to treat a peculiar form of uterine inflammation. They are best relieved by opium, and the application of a few leeches previously to the uterus makes it more efficient.

The lochia is the discharge that flows from the uterus and vagina while the mucous membrane is returning to its condition previous to conception. The character of the discharge will indicate whether the changes that are going forward are healthy or otherwise. The first

appearance is sanguineous: the dark grumous blood oozing from the uterine veins gives it that character. It then becomes greenish yellow, thick and oleaginous; and lastly, is thin and serous. It may retain the sanguineous colour too long, and it may be brighter than is safe for the patient: the vessels have not sufficiently closed; and so long as this is the case there is always a risk of hæmorrhage taking place if caution be not used. While this appearance continues, therefore, the patient must be kept quiet, and as much as possible in the horizontal position. Ergot of rye, in small doses frequently repeated, might be given with advantage; and, in anæmic constitutions, the tinct. ferri. hydro-chlor. is very useful: the sulphate of iron also, with sulphate of magnesia, in some tonic infusion, may be given. These remedies will assist in checking the discharge; but all may be rendered ineffectual if the patient be allowed too much indulgence. Improper food, sitting up in bed, or moving about, may convert this discharge suddenly into hæmorrhage.

The thick oleaginous appearance may become purulent or muco-purulent. When this happens it indicates pre-existing inflammation in the vagina or neck of the uterus. The inflammation is not acute, and therefore may not give rise to any more permanent symptoms that would attract attention. Nevertheless, it exists, and its presence is of importance, because of its ultimate consequence. Your patient may so far recover her health as to be able to get up and go about without much inconvenience. This discharge, however, continues, and may continue for months, until some new change is observed. She is supposed to recover perfectly from her confinement, and your duties to be fulfilled; but these new symptoms, a pain in the back and loins, a sense of weight and bearing down, give rise to anxiety; and the continuance, or perhaps the increase, of the purulent discharge, forms, as it were, the connecting link between these symptoms and the previous confinement. Thus, the whole of her present distress is attributed, perhaps justly, to that period. Something then happened that should not have happened, or something was done that should not have been done; and it is just possible you may get the credit of not having fulfilled your duties at all, and of being the cause of all the present mischief. You will admit, therefore, that a purulent character in the lochial discharge is of sufficient importance to demand your closest attention. It is necessary to ascertain the cause of it. Is its source in the vagina, or cervix of the uterus, or cavity of the cervix? All these queries can only be

answered by an examination of the parts themselves. Such an examination, however, cannot be advantageously made during the lochial period. It is only when this time has passed over, and the discharge has assumed more distinctly the character of leucorrhœa, that it may be required. The cervix of the uterus should then be carefully observed, to ascertain whether it may have been torn: if so, fissures will be found in it, which may be inflamed, and perhaps ulcerated. The cavity of the cervix also should be noticed, especially if a thick viscid mucus is adhering to it. Lastly, the vagina requires attention: there may be abrasions on its surface, or a slough may have separated, leaving an ulcer behind, or it may be generally inflamed, the inflammation being of a sub-acute character. All or any of these causes will give rise to the secretion of pus; and, unless they are at once removed, may increase, and expose your patient to months of protracted suffering long after her delivery. You will perceive, therefore, that this discharge, the lochia, requires your observation; and if, from your inquiries, you should have the slightest suspicion that it is not healthy, you should no longer take second-hand reports about it, but examine for yourself.

Lacerations of the perineum are unfortunately the too common accompaniments of labour. It very seldom happens that the fourchette escapes being torn; but this will give you no trouble. The integument may also give way, and a rent formed of different degrees of extent. It may engage the cellular structure alone; it may pass down to the sphincter of the rectum, or go even through the spincter, and throw the rectum and vagina into one cloaca. You can readily judge what a serious accident this would be, and to what misery it would expose your patient. It occurs, however, very rarely, and can hardly take place without extreme neglect, or carelessness in the management of the patient during the expulsion of the child. When it happens there is no other remedy for it but to attempt to re-unite the wound by the interrupted suture. This means cannot be applied immediately after delivery, nor so long as there is any risk of the extension of the inflammation through the vagina to the uterus. When, however, this danger is removed, and the vagina and perineum have contracted nearer to their natural size, this operation may be performed. Partial lacerations are, however, more frequent. It is better to allow the torn margins to heal by second intention, and not, as in the former case, to attempt to re-unite them. At first sight these lacerations appear much more extensive than they really

are, because the perineum is so much stretched by the passage of the child. When contraction, however, takes place, the wound will gradually shrink, until a rent of some inches may not exceed the quarter of an inch. You cannot, therefore, so well judge of the effect of the injury until this contraction has taken place. While the edges are healing they should be protected from the irritation of the discharges by applying a piece of lint between them covered with cerate or zinc ointment. The patient should also remain on her side rather than her back. There is generally no difficulty in the healing of these lacerations: we have to consider rather their subsequent effect. The most common consequence is the tendency to prolapsus of the womb. The powerful support which the healthy perineum gives to the pelvic viscera is now destroyed, and the weight of the womb, still large, presses down on the vagina, which unsupported it readily yields to, and thus prolapsus uteri is established. In order to avoid an accident of this kind the patient should remain longer in the horizontal position than usual, so as to avoid bringing the weight of the enlarged womb on the vagina. After the tenth day, the usual time for the cessation of the lochia, astringent injections should be used, to increase the contraction of the vagina as much as possible; and lastly, when the patient is allowed to go about, it would be advisable to use some mechanical support to the uterus for a short time. There is a great variety of uterine bandages. Some press on the abdomen from above, as well as on the perineum from below; others are applied merely to the perineum. You would, of course, select only the latter. A well-made bandage, that fits closely about the hips, and having a perineal pad attached to it, is a great support and comfort to the patient when she first moves about.

INFLUENCE OF LONG HAIR ON THE HEALTH.

DR. FREDERICQ, in his *Annals of the Medical Society of West Flanders*, narrates the case of a little girl of three years of age, in whom all the symptoms of chlorosis were manifested. The disease resisted all treatment until the child's curls were cut off, when she rapidly recovered. Dr. Fredericq attributes the effects in this case to the abstraction of iron from the system (!) The child's hair was black; a pigment which contains a notable quantity of iron.—*Gazette Médicale*, 1849.

X

Original Communications.

ON

FATTY DEGENERATION OF THE SMALL BLOODVESSELS OF THE BRAIN, AND ITS RELATION TO APOPLEXY.

BY JAMES PAGET.

THE following pages include the substance of a communication lately made to the Abernethian Society of Saint Bartholomew's Hospital. It is not without hesitation that I publish observations so incomplete as these are; nor would I do so, if it were not that they seem to give sufficient promise of utility to merit at once the attention of other observers, and that the necessity of engaging in other investigations must, for some time, hinder my pursuing these.

In the least degrees of the disease which I propose to describe, the only apparent change of structure is, that minute, shining, black-edged particles, like molecules of oil, are thinly and irregularly scattered beneath the outer surface of the small bloodvessels of the brain. Such a change may be seen in the vessels of portions of the brain that appear quite healthy, as well in the capillaries as in branches of both arteries and veins of all sizes, from 1-150th of an inch in diameter, to those of smallest dimension.

As the disease makes progress, the oil-particles may increase in number till the whole extent of the affected vessels is thick-set with them, and the natural structures, even if not quite wasted, can hardly be discerned. While their number thus increases, there is, also, usually, a considerable increase of the size of many of the oil-particles, and they may be seen of every size, from an immeasurable minuteness to the diameter of 1-2000th of an inch. In other places, one sees, instead of this increase of scattered oil-particles, or together with it, groups or clusters of similar minute particles, which are conglomerated, sometimes in regular oval or round

masses, like large granule-cells,* but more often in irregular masses or patches in the wall of a great part of the circumference of a bloodvessel.

In a single fortunately selected specimen, one may see, in different branches of a vessel, all these degrees or states of the disease—the less and the more thickly scattered minute oil-particles, the clusters of such particles in various sizes and shapes, and the larger particles like drops of oil.

When the fatty degeneration has made much progress, changes in the structure, and, not rarely, changes in the shape also, of the affected blood-vessels may be observed. The chief change of structure appears to consist in a gradual wasting of the more developed proper structures of the vessels: growing fainter in, apparently, the same proportion as the disease makes progress, the various nuclei or fibres are at length altogether lost, and bloodvessels of even 1-150th of an inch in diameter appear like tubes of homogeneous pellucid membrane, thick-set with the fatty particles. The structures of the vessels are not merely obscured by the abnormal deposits: they waste and totally disappear.

The changes of shape which the vessels may at the same time undergo are various. Very commonly, the outer layer of the wall is lifted up by one or more clusters of oil-particles, and the outline of the vessel appears uneven, as if it were tuberos or knotted.† Some-

times the outer or cellular coat of the vessels is for some distance raised far from the middle coat, as if it were inflated, and the space between them contains numerous particles of oil; (but, perhaps, this raising up of the outer coat is often produced by water being imbibed while preparing the specimen for examination.) Sometimes, but I think only in vessels of less than 1-500th of an inch in diameter, partial enlargements, like aneurismal dilatations or pouches of their walls, are found.

The vessels most liable to this disease are, I think, the arteries of about 1-300th of an inch in diameter; but it exists, generally, at the same time, in the veins of the same or of less size. As a general rule (judging from the specimens hitherto examined), the disease decreases in nearly the same proportion as the size of the vessels, and the smallest capillaries are least, if at all, affected. But there are many exceptions to this rule; and it is not rare to find vessels of from 1-2000th to 1-3000th of an inch in diameter, having parts of their walls nearly covered with the abnormal deposits.

The principal and first seat of the deposits is, in arteries, in the more or less developed muscular or transversely fibrous coat:—in veins, it is in the corresponding layer, immediately within their external fibro-cellular nucleated coat:—in vessels, whether arteries or veins, whose walls consist of only a simple pellucid membrane bearing nuclei, the substance of this membrane is the first seat of the deposits. In some cases the outer fibro-cellular coat of both arteries and veins appears to contain abundant fatty matter. But it is seldom that, in an advanced stage of the affection, any of the several coats of a bloodvessel can be assigned as its chief seat; for even in large four-coated arteries they wholly waste, and their remains appear united in a single pellucid layer, of which the whole thickness may be occupied by the deposit.

The figures represent some of the most usual appearances of the degeneration.

* I mean such bodies as Dr. Hughes Bennett calls "exudation-corpuscles" (Treatise on Inflammation, fig. 15); such as Reinhardt (Traube's Beiträge, H. II. and Virchow's Archiv. H. I.) has described, in relation to their multiform origins, as Körnchenzellen; and Virchow, under the same name, in his Archiv. H. I. 142. Similar corpuscles occurring among the products of inflammation were described by Gluge as "composite inflammation-globules;" but Vogel (Pathologische Anatomie, p. 126) gives good reasons for using the term "granule-cells" for these corpuscles also.

† In such cases, the masses of oil-particles often appear to lie outside the vessels, but examination with well-adjusted light will always find the outer layer of the wall, as a distinct dark line, raised up and continued over the surface of the cluster of oil-particles, or lost on its most prominent part. Dr. Hughes Bennett, in his Researches on Inflammation of the Nervous Centre, mu-t, I think, have overlooked this fact. His attention being directed primarily to the changes of the structure of the brain itself, and to the products of inflammation in it, he appears to have less minutely examined the state of the bloodvessels in the diseased parts. Some of

the appearances produced by fatty degeneration are represented by him (in the Edinburgh Medical and Surgical Journal, vol. lviii., pl. v. fig. 56, and very accurately in vol. lix., pl. i., fig. 51); but he refers them to the vessels becoming coated externally with exudation-granules, the products of inflammation.

FIG. 1.

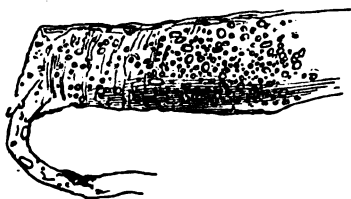


FIG. 2.

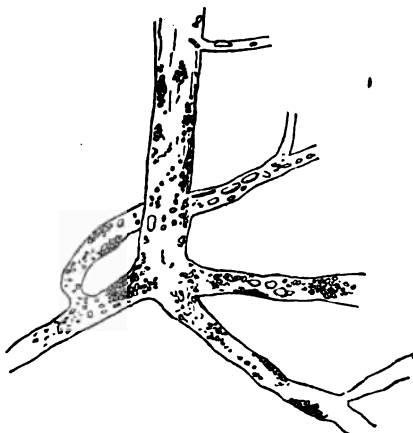


FIG. 3.



FIG. 1. An artery, of 1-300th of an inch in diameter, and a branch given from it, from the softened corpus striatum in the third of the related cases. Numerous oil-particles of various sizes are scattered in the muscular coat, traces of the tissue of which appear in obscure transverse marks.

FIG. 2. From the same part, a vein 1-600th of an inch in diameter, with branches from 1-1200th to 1-1800th, and portions of capillaries. Scattered oil-particles, and groups, like broken irregular granule-cells, are seen in the homogeneous pellucid walls of all the vessels.

FIG. 3. A vessel of 1-600th of an inch in diameter, and another of 1-1800th, with a branch of 1-3000th of an inch. Groups and scattered oil-particles are thick-set in the simple, pellucid, membranous walls. From the second of the related cases.

The changes of structure just described indicate an affection of the small blood-vessels similar in its nature to those which form the large class of "fatty degenerations." Viewed in its relations to them it presents many points of interest; but, reserving these, I prefer now to illustrate the fatty degeneration of the bloodvessels of the brain in its connection with cerebral apoplexy, of which it may be suspected to be the ordinary precursor, or even the immediately predisposing cause. In the following cases the connection was well-marked.

CASE I.—Joseph Collett, a tall thin labourer, 64 years old, was admitted into Mark's Ward, under Dr. Hue, on the 15th of January. He was completely comatose, and soon after admission was found to have hemiplegia on the left side. Scarce any change occurred in his state: he remained quite uncon-

scious, and died in two days. The only history that could be obtained of him was, that he was often subject to fits of melancholy, and was thought not quite right in his mind. A policeman, who brought him to the hospital, saw him stagger as he was walking in the street, and then fall insensible.

In the examination of the body eleven hours after death, the skull was found thin and brittle; the dura mater was unusually thin; the vessels of the pia mater were empty, and the surfaces of the arachnoid membrane were dry and sticky. The cerebral convolutions were compressed and flattened. Nearly the whole substance of the right cerebral hemisphere was reduced to a kind of shreddy pulp, intermingled with coagulated blood. The destruction of substance was greatest about the centre of the hemisphere; the corpus striatum and optic thalamus were completely

broken down, scarcely a trace of either remaining. The peripheral parts of the hemisphere were moderately firm, and looked healthy. No yellow softening existed. The blood extravasated might have filled a wine-glass. The septum lucidum was entire. The left lateral ventricle contained about three drachms of a light brownish fluid. The whole of the left cerebral hemisphere and its ganglia appeared healthy.

The anterior border of the right hemisphere of the cerebellum was broken down, and contained recent blood, which was probably derived from the extravasation in the cerebrum. The pons Varolii also contained several little masses of recent clotted blood, separately effused.

The longitudinal sinus contained only a small black clot at its lower part; the lateral sinuses contained thick dark blood. Small deposits of yellow matter existed about the junction of the anterior and middle cerebral arteries, and a streak or two of similar deposit along each of their trunks, but there was no disease sufficient to impede the passage of blood through them.

The brain alone was allowed to be examined.*

In examinations of numerous minute arteries and veins taken from the ruptured parts of the cerebral hemisphere, I found that nearly all, but especially the arteries from 1-200th to 1-1200th of an inch in diameter, had abundant minute molecules of oily matter scattered in their coats, directly beneath their external surface. Some of the molecules appeared to lie in the cellular coat, but more in the coat beneath it, whether muscular or simply membranous. In the vessels below 1-1200th of an inch in diameter such deposits were rare, yet they were sometimes found occupying a large portion of the wall. In a cluster of vessels drawn from the wall of the cavity in which a small clot of blood was effused in the pons, I found the degeneration in its most advanced form. Thick-set oil-particles, and larger drops of oil, large clusters of molecules, like granule-cells, and patches of granules, and some almost like pigment-cells, abounded on nearly every part of these blood-vessels. The proper structure of the vessels had

so disappeared that I could not tell whether they were arteries or veins.

No inflammatory or other morbid deposit existed in the many portions of the substance of the brain that were examined together with the blood-vessels.

CASE II.—Hannah Bailey, a large and fat washerwoman, 47 years old, was admitted into Faith Ward, under Dr. Burrows, on the 4th of January. She had always enjoyed good health, and was troubled with only a winter cough, till the 27th of December, when at breakfast, after complaining of headache, she suddenly became unconscious. She recovered her consciousness in about half an hour, and went about her work; but about four hours afterwards she felt faint, sat down, and then fell to the right side. She was insensible for a few minutes; and on recovering had lost the use of both right limbs, but could speak distinctly. In about three hours afterwards she had another attack, and remained unconscious till midnight, when she partially recovered.

Till the last day of her life she remained almost always in a half-conscious state; hemiplegic on the right side, and generally unable to speak. In the last day she became more and more comatose, and so died.

In the examination after death, diseased mitral valve, enlarged heart, and signs of bronchitis, were found. In the aortic valves and the arch of the aorta, and about the orifices of its great branches, were numerous scattered deposits of fatty matter; and similar deposits were abundant in the coronary arteries.

The skull and dura mater were thick. On the upper surface of the left cerebral hemisphere, the substance of the brain, for about two inches in length, and one in breadth, near the longitudinal fissure, was flattened, soft, and spotted with deep red. The parts immediately around this portion were of a light yellow tint, and much softer than the rest of the cerebral substance. Beneath the red-spotted part, and to within a line of the roof of the lateral ventricle, was a brownish-red mass, consisting of clotted and partially decolorized blood, intimately mixed with cerebral substance. The portion of brain around this was softened and yellowish, but

* I am indebted for the particulars of both this and the next case to Dr. Kirkes.

the portion between the clots and the lateral ventricle appeared healthy. So, also, did all the other parts of the brain.

Several portions of yellow fatty deposit existed in the walls of the branches of the arterial circle of Willis, and in the walls of the anterior and middle cerebral arteries; but the deposit did not anywhere appear sufficient to impede the stream of blood.

In microscopic examinations of portions of this brain, I found fatty degeneration, in the forms described above, affecting alike the vessels of the healthy, the broken, and the softened portions of the brain; but the vessels of the healthy parts were affected in a less degree than those of the others. Some vessels, not less than 1-200th of an inch in diameter, appeared to have almost totally lost their natural structures, though presenting but little fatty degeneration. A similar loss of natural structure was observable wherever the degeneration existed. The disease affected principally the bloodvessels of about 1-400th of an inch in diameter, but in some parts it existed also in even the smallest capillaries; such as, when collapsed, measured not more than 1-8000th of an inch. In many specimens it was easy to trace both an inner and an outer line at the sides of the deposits,—proving that they lay in the very substance of the coats of the vessels.

In and about some of the affected bloodvessels were numerous lozenge-shaped, dark, blood-red crystals, some of which lay among the clusters of fatty particles in the walls, while others appeared to be within the cavities of the bloodvessels.*

Some, also, of the small bloodvessels presented well-marked partial dilations, like aneurismal pouches, or like more extended varicose enlargements of their walls. In these, as in others, but in no greater degree, the fatty degeneration existed.

The cerebral substance appeared generally healthy, but in the softest parts granule-cells existed,—not, however, in great abundance.

* Respecting these singular crystals, the reader may consult Virchow, who believes them to be formed of modified hæmatin (Ueber pathol. Pigmente; in his Archiv, B. i. p. 390, Tab. iii.) or Zwicky (De corporum luteorum origine). KÖLLiker also has some remarks on them in his Zeitschrift für wissenschaftl. Zoologie, B. i. p. 366.

CASE III.—E. Rose, a sempstress, 21 years old, was admitted on the 8th of October into Harley's ward, under Mr. Stanley, with an outward dislocation of the patella that had existed two months. The dislocation was with much difficulty reduced on the 16th of October, and, with equal difficulty, was prevented from recurring. The pressure of apparatus on the reduced patella caused slight sloughing of the integuments over it, and she was under treatment for this, when, on the 29th of November, symptoms of affection of the brain ensued. Her general health had not been materially affected, but for three or four days she had complained of want of sleep, and headache. On the 29th she became, almost suddenly, hemiplegic, losing all sensation and power of voluntary motion on her right side. She appeared, too, very drowsy, and half comatose. From this time she seemed occasionally to improve, but, on the whole, became gradually worse: she passed restless nights, often shrieking and delirious, and was once or twice severely convulsed; her tongue was usually dry, and nearly black, and she had intense headache. A week after the attack of hemiplegia, sloughs formed in the skin of the right leg where the bed-clothes pressed on it: a few days later the skin and other tissues began to slough on the nates on both sides, on the sacrum, the right arm, the back of the head, and the right ear. She died in extreme emaciation on the 31st of December.*

In the examination after death, the tissue of the pia mater was found containing a large quantity of pellucid fluid. All the brain appeared quite healthy, except the left corpus striatum, of which nearly the whole was reduced to a soft pulpy substance, with mingled shades of pink, greyish, and pale yellow, and with small spots of blood here and there scattered through it.

On the mitral valve there was a thick patch of recently deposited lymph, and in the upper part of the left kidney was a large collection of pus in a cavity with sloughing walls.

Tufts of small blood-vessels drawn from the diseased part of the brain showed the most striking degeneration. It was best marked in vessels from

* For many of the particulars of this case I have to thank Mr. H. O. Thorold, who was the patient's dresser.

1-150th to 1-400th of an inch in diameter. These presented no change of shape, no dilatations: their outlines were distinct and uniform, but of the several tissues of their coats scarcely a trace remained: they appeared as if formed of pellucid simple membrane, varied only by the fatty deposits, which existed in all the varieties of form already described. In blood-vessels less than 1-400th of an inch in diameter, both the loss of proper structures and the fatty degeneration were less, and both seemed to diminish with the size of the vessels: many of the capillaries appeared nearly healthy; others, however, were thickly sprinkled with oil-particles.

The softened cerebral substance contained abundant granule-cells, with cell-shaped clusters of granules, and diffused granular matter. Some corpuscles, also, were seen like those of lymph formed in inflammation; but these might be colourless blood-corpuscles, such as existed abundantly in the blood. Groups of dark blood-red crystals, of apparently prismatic form, were numerous in the softened substance of the brain.

In the blood-vessels of other and healthy-looking parts of the brain, scarcely any appearance of fatty degeneration was observed. The great arteries of the brain appeared quite healthy, and there were only very trivial deposits of fatty matter in the aorta.

In the foregoing cases, the fatty degeneration of the small blood-vessels of the brain existed in an extreme degree. In a less degree I have observed it in the brain of a man, 51 years old, who died with suppression of urine; in that of an epileptic woman, 45 years old; and in such other cases that I think it will be found a frequent condition in the apparently healthy brains of persons past the middle period of adult life. In all such cases, when the disease is far advanced in any of the blood-vessels, the loss of their proper structures, and the weakening of the remains of their walls by the copious deposits of fatty matter in them, must make them peculiarly liable to rupture. It cannot but be that this affection should constitute a predisposition to apoplexy, whether occurring in its simplest form or in connection with cerebral softening; indeed, how readily vessels thus affected may be torn, we may see in the fre-

quency with which, in the microscopic examinations of them, specimens of considerable blood-vessels are found torn across at or near the anormal deposits.

If what I have written should induce others to investigate this subject, I venture to suggest that they should especially examine the connection of this form of degeneration with the common fatty or atheromatous degeneration of the larger arteries, and with the morbid softenings and other errors of nutrition in the brain. The foregoing cases make it probable that the degeneration may advance far in the vessels of the brain, while affecting the larger arteries in only a trivial degree. In two of these cases partial softening of the brain existed; but in one, at least, of them this change was most probably subsequent to the rupture of the blood-vessels. Dr. Hughes Bennett's cases* show that the degeneration is frequently connected with cerebral softening, but not whether it is usually the precursor or the consequence of that change.

It may assist future researches if I add a short notice of the principal observations that have been lately made on the diseases of the small bloodvessels.

With the exception of the notices of the general dilatation of the small vessels of inflamed parts, scarcely any facts had been recorded in relation to this subject, till Kölliker and Hasse published their observations on the occurrence of "aneurismal capillaries," in a case of acute inflammatory softening of the brain, with capillary apoplexy. This affection, consisting, as the name implies, in partial pouch-like dilatations of the walls of small bloodvessels in inflamed parts, was subsequently observed by them in inflammations produced by severe injuries of the brains of rabbits.† Bruch‡ detected a similar condition of the small arteries in a case of traumatic inflammation of the peritoneum of a bitch; and Harting§ in a case of diseased ovary. More lately, two cases have been described by Kölliker, and one by Rinecker, in which such aneurismal

* In Edinburgh Med. and Surg. Journal, Vols. 58, 59, 60.

† Their observations are recorded in Henle and Pfeuffer's Zeitschrift, B. iv. p. 1.

‡ In the same Journal, B. v. p. 62.

§ *Nederlandsch Lancet*, Jaarg. iv. No. 2. Dr. v. Leeuwen kindly gave me a specimen displaying the bloodvessels here described.

dilatations existed in the vessels of softened portions of brain;* but in all these cases the dilatations affected, not the smallest capillaries, but those of largest size and the small veins. In all these cases, also, small blood-red points, characteristic of the so-called capillary apoplexy, and usually ascribed to effusions of blood, were found to be the aneurismally dilated vessels full of blood.

I lately observed this kind of dilatation in a case of acute softening of the brain, and could confirm all that Kölliker has described of it; but it existed in comparatively few of the blood-vessels of the diseased part. I have mentioned it, also, as occurring among the vessels of the brain in the second of the cases recorded above; and Dr. Ormerod tells me that he observed "fatty degeneration, with irregularly formed vessels and lateral expansions," in the neighbourhood of a large collection of pus in the brain. Doubtless, such partial dilatations are very frequent, if not constant, in cases of cerebral softening; but it has yet to be determined whether they are characteristic of inflammation, or whether, as I suspect, they may occur as well in the vessels weakened by fatty degeneration.

Kölliker† has recently described a disease, which he names "spurious aneurisms of the smallest arteries of the brain." It consists in effusions of blood between the middle and internal coats of arteries, from one-third of a line in diameter to those of smallest size: effusions resembling those of "dissecting aneurisms." He says this is, "according to my observations hitherto, the regular forerunner and accompaniment of common and capillary apoplexies." I have too much confidence in the accuracy of Professor Kölliker to doubt his observations; and though I have seldom, and only obscurely, seen what he describes and figures in his Tab. xix. fig. 1, yet I believe that these effusions of blood in the coats of the smallest arteries may be usual in cases of apoplexy. But I believe, also, that such effusions will be found to be only one of the consequences of previous degeneration of the

arterial walls. Without such degeneration, neither the partial rupture of the vessels producing spurious aneurisms, nor the complete rupture permitting the effusion of an apoplexy, is likely to happen.

Respecting fatty degeneration in the small blood-vessels, the only notice I can find is by Virchow,* who says he has seen glistening red or yellowish little fat-drops in the epithelial cells of the capillary vessels of the kidney. This, however, must be quite a different affection from that which I have described, and in which the fatty degeneration is seated in the muscular or other corresponding coat of blood-vessels, that, so far as I have observed, have no epithelium. So, too, it is a different, though it may be a related, affection which Rokitsansky† describes as consisting in the excessive deposit of internal coat in very fine arteries, making their walls thicker, turbid, less transparent and brittle. This affection is well known in the bloodvessels of the brain just visible to the naked eye: it occurs, too, in those of the uterus, mammary gland, and perhaps many other organs in process of senile atrophy. Rokitsansky "believes also that he has convinced himself of a similar state in the proper capillary vessels."

It will be observed, that nearly all the observations hitherto made relate to the bloodvessels of the brain. The facility with which these can be separated and cleaned for microscopic examination may explain this: but it is not likely that the brain should be the only organ whose small vessels are liable to these affections.

AMALGAMATION OF IRON.

M. BOETTGER has succeeded in increasing the affinity of mercury for iron, by the following means:—Two parts of sulphate of iron were triturated with one part of zinc and twelve of mercury, twelve parts of water and one and a half of hydrochloric acid being added. The iron to be amalgamated was heated and rubbed with the mixture on tow: in a few minutes the iron was covered with a glistening surface of mercury, which adhered firmly.—*Journal de Chimie Médicale*, 1849. X

* The three cases, and a reference to one by Hasse, are in Kölliker's *Zeitschrift für wissenschaftliche Zoologie*, B. i. p. 262.

† In his *Zeitschrift für wissenschaft. Zoologie*, Bd. I. p. 264.

* In his *Archiv*. Bd. i. p. 145.

† *Pathologische Anatomie*, B. ii. p. 683.

HERNIA REDUCED EN MASSE.— OPERATION.

By JAMES LUKE, Esq.
Surgeon to the London Hospital.

THE subject of the following case is a gentleman, 77 years of age, residing at some distance from London; but, at the time when he reported himself as having been taken ill, staying at an hotel in Bishopsgate Street. He arrived in town on Thursday, the 27th of December last; and, after having taken much exercise during the early part of the day, returned to his hotel to a late dinner, consisting of partridge, &c., soon after partaking of which he became sick, and vomited. He did not, however, obtain medical assistance until the evening of the succeeding Sunday, December 30th, when he requested the attendance of Mr. H. Callaway. At this time he could not retain anything on his stomach, but did not complain of any pain, except at the transverse colon, which was of so slight a character that he scarcely cared to allude to it. His bowels had been freely opened on the 28th, and on the 29th there had been a slight scybalous evacuation. He attributed all his ailments to his having eaten partridge on the 27th. Upon inquiry it was ascertained that he had been the subject of inguinal hernia of the left side, on account of which he had worn a truss for some years, and had experienced some pain from its pressure on the day preceding. Mr. Callaway further elicited the fact that the hernia had descended on the preceding Tuesday, the 25th, and that the patient had himself pushed it up without difficulty. He was, however, so determined in his opinion that the hernia had nothing whatever to do with his present symptoms, that it was impossible to get any clear history, for he continually evaded questions put to him upon that point, to give his own opinion of the nature of his case. A careful examination of the abdomen was made, but neither tumor, tenderness, nor tympanitis, were found. Ordered blue pill and colocynth, together with effervescing draughts.

Dec. 31st.—The pills were immediately rejected, and the bowels had not been relieved, while the sickness had

increased in severity. Neither swelling nor pain had supervened. He drank soda water and cold water, but abstained from all other things. Ordered warm fomentations to the abdomen, and a large injection per rectum. Calomel and colocynth to be taken every four hours.

Jan. 1, 1850.—The vomited matter had become stercoraceous, and hicough had supervened. On again examining the abdomen Mr. Callaway found a very slight pain on pressure a little above the internal abdominal ring on the left side, but there was not any tumor discovered. Mr. Callaway thought that the symptoms were attributable to some permanent obstruction.

At this period, about ten a.m., I first saw the patient in consultation, at Mr. Callaway's request. He was then much exhausted, and his pulse low. He was rejecting everything from his stomach, and was suffering from a peculiar kind of hicough. I found the abdomen, as stated above, free from tympanitis, and pressure could be borne without inconvenience over the whole surface. A slight sensation of pain was caused by pressure above the left inguinal canal, but the most careful examination failed to detect any tumor or fullness within the abdomen or within the canal. On attending to the condition of the external ring and spermatic cord, important information was obtained. The ring was found sufficiently large to admit the point of the finger readily within it, while the cord, as it passes through, as well as below, the ring, *was clearly defined, and unobscured by any overlying hernial sac.* These circumstances led at once to the conclusion that the sac, which the previous history had informed us to have been present at no very distant period with the hernia when it descended, had been displaced from its former position, and had been returned into the abdomen, together with its contents. Thus a high presumption at least was established, that the hernia had been reduced en masse, while the existing symptoms justified the further conclusion that the hernia was in a state of strangulation. Supposing that we had sufficient data from which to form a correct opinion, we agreed to recommend an exploring operation, provided relief should not be obtained before three o'clock, at which

time we proposed to meet again. In the meantime, calomel and opium were ordered.

At three o'clock the hoped for, rather than expected, relief had not been obtained, although the sickness had not been so urgent; but the exhaustion had increased.

The operation was now proposed and urged upon the patient, but his assent was steadily and perseveringly withheld, and much time was devoted to overcome his objections.

We again met at 10 p.m., and again urged the importance of avoiding delay, but with a result similar to the last.

2d.—During this day Mr Callaway continued his attendance alone, in the latter part of which the exhaustion became much increased, and tympanitis made its appearance. The sickness, however, had ceased, but the constipation continued. At 10 o'clock I again attended, having been informed that our patient would then consent to have the operation performed, as we had proposed, provided some castor-oil which he determined to take in the afternoon should not have previously acted on his bowels. On examining the inguinal rings at this period, there appeared to be a slight tendency to hernial protrusion both on the right as well as on the left side, but on neither side was there any pain on pressure. Previous to this time attempts had been made to reproduce a hernial descent, by directing the patient to cough, strain and walk about the room, without any hernia appearing, and upon this occasion the alight fulness rather than tumor at the internal abdominal rings on both sides receded immediately under the pressure of the finger without pain. As the castor-oil had not acted on the bowels, after some further delay the requisite consent was obtained, and the operation proceeded with by pinching up a transverse fold of skin over the inguinal canal, and transfixing it with a knife in the ordinary way. This laid bare the abdominal tendon over the canal, on incising which the canal itself and spermatic cord were exposed. At this period a small tumor presented itself at the internal ring, and became larger, or rather came more into view, as the incisions of the ring gave more freedom to it. The tumor was rounded in form and of a white appearance, but seemed to contain some dark sub-

stance within it. When a small opening was made into it, there issued some bloody serum, and when it was more freely opened a portion of discoloured intestine was brought into view; the discolouration, however, was not very great. A finger introduced along the surface of the intestine passed evidently into a hernial sac, at the upper part of which, and about two inches from the internal inguinal ring, a contracted part was detected encircling and strangulating the intestine. This contraction or stricture was clearly produced by the neck of the sac, but was not very tight. The point of the forefinger with some little difficulty was introduced within its grasp, and served as a director on which it was divided readily with a probe-pointed bistoury. After this was accomplished the intestine was carefully and easily reduced from the sac into the general cavity of the peritoneum, and the wound closed by two sutures, plaster and bandage.

Ordered—beef-tea in very small quantities at a time—opium if sickness should supervene. But if no sickness took place after the lapse of three or four hours, small doses of sulphate of magnesia, in peppermint water, were to be given and repeated every three hours until the bowels were relieved.

3d.—There had not been any sickness, and the bowels had been freely open very shortly after the operation. Neither of the medicines ordered the evening before had been taken. There was some tympanitis, and a continuation of the hiccough, but both were diminished. The exhaustion was also less. Ordered, more nourishment and some bottled stout.

4th, 5th, 6th.—On these days there was gradual improvement in all particulars. The bowels had acted well, and the tympanitis and hiccough had passed away. On the 6th the wound was dressed and found to be nearly healed by adhesion. The sutures were removed.

8th.—The patient thought the wound was healed, and the dressings were not changed. On this day, as he appeared convalescent, I ceased attendance.

The case described in the foregoing sentences is of a kind similar to two others which I have already sent to you for publication, and which have appeared in your GAZETTE. I am

anxious to state that it is the eighth case of the same kind which has fallen under my observation, for the reason that surgeons of experience still assert that such cases are *extremely rare*.—an expression which appears likely to have an injurious influence in removing them from consideration amongst the ordinary probabilities of practice. It is a truth that operations for their relief will sanction the use of such an expression; but cases requiring operation, in which no operation has been performed, I believe to be more frequent than has hitherto been admitted. I ventured to express an opinion to this effect in my last communication to you upon the same subject, which opinion appears to be confirmed in some degree by Mr. Syme, of Edinburgh, in some observations made in connection with a case published in the *Monthly Journal of Medical Science*. Mr. Syme prefaces his communication by the observation that such cases are "extremely rare," but immediately remarks—"I have been *several times* asked to see patients sinking under the effect of the reduction *en masse*, and on two occasions have had an opportunity of examining the parts concerned after death. The stricture caused by the neck of the sac then was so obviously the cause of death, and might have been so easily remedied by incision, that the non-performance of an operation within due time seemed a matter of deep regret." Observations of a similar import have been made to me by surgeons in London of experience equal to Mr. Syme's. We are therefore necessarily led to the conclusion that hernial reductions *en masse* have been far more frequent than operations for their relief; all of which cases, when operations have not been performed, have doubtless, and almost necessarily, terminated fatally, from omission of the efficient remedial means. With such knowledge, it appears a matter of importance to keep the attention of surgeons, and of all others who may be called to attend obstructed bowels, directed to this subject, by the publication of cases as they occur, in order that they may not be lost sight of, as being within the range of probabilities of practice. This course appears the more desirable, from the circumstance that some error exists both with respect to the number of operations

which have been performed, and also with respect to their results. Mr. Syme, in his concluding sentence, remarks, that his case "may also be regarded as possessing some interest, from being, so far as I know, the only instance of recovery from a hernia which has become strangulated within the abdomen;" from which we are led to infer that all those operations which have been performed before that of Mr. Syme's have been fatal. I am happy to be enabled to correct this error, and to point out that the results of five operations which I have performed on these forms of hernia have been, upon the whole, very satisfactory. (One only of these terminated fatally from lesion of the intestine, mortification having occurred previous to the performance. Another case terminated fatally on the seventh day after the operation, from erysipelas attacking the wound, the symptoms of obstruction having entirely ceased, and the bowels having recovered their perfect function. The other three cases have entirely recovered, and, I believe, are still living. These results, while they serve to correct the erroneous impression conveyed in the sentence quoted above, will also encourage efforts in the right direction, especially as the omission of those efforts have usually one uniform fatal result. The same inferences may be drawn from the successful cases of Mr. Wade and other surgeons.

The importance of the above does not, however, depend so much upon the addition which it makes to the number of successful cases, as upon the clear and valuable light which it throws upon the diagnostic marks which distinguish such reductions *en masse*. In its perusal it will be observed that some difficulty was experienced, both by Mr. Callaway and myself, in obtaining a clear and satisfactory history, in consequence of the notion which the patient entertained that the hernia had nothing to do with his existing condition, while the same idea influenced his refusal to submit to the proposed operation. We had, therefore, in more than an ordinary degree, to depend upon the local signs for the diagnosis which justified our proceedings. The first and important material fact in the history which was clearly made out, was the previous existence of a reducible inguinal hernia

on the left side; and, less clearly, that it had been down five days before Mr. Callaway saw the patient, and had been then easily reduced. The point to be determined was, whether those local signs which usually remain after an ordinary reduction still continued in the case under consideration, or had been removed by the easy reduction alleged to have been made. The local examination satisfied our minds that they had been removed, and hence our conclusion upon the case. The signs alluded to are, the obscurity of the ring and spermatic cord, particularly of the last, caused by the continued presence of sac. Had the sac continued as in ordinary reduction, the fact would have been known by the obscurity of the cord, which it overlies—and the inference would have been drawn that the hernial contents had been reduced without the sac being reduced at the same time. But as no obscurity existed *after* the previously-ascertained descent of an hernia, the conclusion that the sac also had been reduced, together with its contents, seemed the only proper one to be drawn from the premises. The existing symptoms of intestinal obstruction also pointed to the high probability of strangulation being present, although the circumstance of almost immunity from pain at the part might have led to error if previous experience had not informed me in how mitigated a degree this symptom might appear, even when *severe* strangulation existed.

Mr. Reid, of Canterbury, among many judicious remarks appended to a case of partial reduction en masse, published by him in the Provincial Journal, observes—"The existence of deposition of fat in the cord often placed at the external ring, cysts of the cord, and varicocele, would cause a fulness and obscurity about it which could not be distinguished from that occasioned by the sac, with or without some portion of its contents." In these observations Mr. Reid is correct only in supposing that fat and cysts connected with the cord and varicocele produce obscurity of the cord, but he is not correct in asserting that obscurity from these causes cannot be distinguished from those arising from the presence of hernial sac, with or without some portion of its contents. It will be recollected that all the causes of obscurity referred to, other than those

from sac, are intimately connected with the cord; indeed, so intimately as to follow all its movements. The hernial sac, however, does not obey the movements of the cord, and the difference in this respect affords a ready means of distinguishing the sac, when present, from those other causes of obscurity. The testicle, when drawn downwards, will be followed by the cord. The cord, in descending, carries the bodies which are intimately connected with it; but the descending cord does not much, if at all, affect the hernial sac.

These tumors are, however, of comparatively little moment in considering this subject, for when present they would rather tend to the early adoption of operative proceedings, provided any doubt should arise from them while the patient is labouring under urgent symptoms of intestinal obstruction. An exploration once commenced would almost necessarily be pursued beyond these bodies when their true nature shall have been detected. They may, therefore, be placed amongst those causes which are to be taken as incentives to an exploration, and I think can only stimulate the surgeon in the right direction, to apply his unicum remedium at an early period.

39, Broad Street Buildings,
Jan. 23, 1850.

ON THE INFLUENCE OF ELECTRICITY ON THE PHENOMENA OF SECRETION.

MR. H. F. BAXTER has instituted a series of experiments, which are recorded in the Philosophical Transactions, to determine whether any and what signs of current electricity are manifested during the organic process of secretion in living animals.

The inferences deduced from these researches are—

1. When the electrodes of a galvanometer are brought into communication, one with the mucous membrane of the alimentary canal, the other with the blood flowing from the same part, a deviation of the needle takes place, indicating that the secreting product and the blood are in oppositely electrical states.

2. That this effect ceases after the death of the animal.

3. That this effect arises from the decomposition of the blood.

4. That these changes are effected by the organic action of the part. X

BED-SIDE SKETCHES.

By JOHN CHARLES HALL, M.D.

Fellow of the Royal College of Physicians, Edinburgh; Member of the Royal College of Surgeons, London; Author of "Remarks on the Treatment of some of the more important Diseases, including the principal Diseases of the Eye," &c. &c. &c.

"Concordiâ res parvæ crescunt."

[Continued from p. 144.]

No. 2.—On some Cases of Iritis.

MANY of the diseases of the eye may fairly be considered as belonging to the physician as well as to the surgeon; amongst others must be classed iritis, to the treatment of which a portion of every work on the practice of physic is devoted. It is not for a moment supposed by the author of these sketches that he can hope to throw much additional light on the treatment of a disease on which so much has been written; but he may perhaps be enabled to direct attention to some of the more interesting and practical of those observations, and to the conclusions drawn after a careful examination of this disease, at the bed-side of the patient, during the last fifteen years, as to the best modes of treatment.

The eye may be truly said to exhibit a greater variety of structure, more beauty of arrangement and delicacy of organization, than any other part or organ of the human body. The loss of vision being perhaps the greatest affliction which can result from disease, the investigation of diseases of the eye, and particularly of a disease so common as iritis, and so fearful in its results when neglected or improperly treated, becomes, therefore, at once most interesting and important.

From the very superficial situation of some of the textures, and the transparency of others entering into the formation of the eye, an opportunity is frequently afforded of observing the varied morbid changes produced by disease: in truth, of actually seeing the morbid processes, and of witnessing the commencement, progress, and termination, of diseased action in the more important structures—of learning how disease is modified in them by external and internal circumstances, and of watching the effect of the remedies employed. Thus, by careful observation, an accurate knowledge is obtained of the symptoms,

nature, and terminations, as well as of the degrees and various forms of morbid action which arise in each particular structure.

But is the knowledge thus acquired limited to diseases of the eye only? Not at all; it can be used most advantageously in assisting the diagnosis of diseases in other organs, where a like structure exists, but which are concealed from view; and lastly, by seeing the effects of remedies used in the treatment of the various morbid conditions of the eye, much practical and highly important information relative to the treatment of diseases in other parts of the body may be obtained.

We will only extend these prefatory observations to remark that, in the examination of every affection of the eye, the greatest care and gentleness is required; for the original disease is often much increased by roughly handling so delicate an organ. We once remember a medical friend bringing to us a gentleman suffering from rather a severe attack of iritis, which had followed a blow received in passing through a thorn fence a few days before. The case had been most properly treated, and we could only suggest a continuance of the same remedies. As the patient did not go on so well as could be wished, we were again consulted, and on a very careful examination a very small bit of thorn was seen sticking to the cornea: this was directed at once to be removed, and the case quickly assumed a more promising aspect. This shows how necessary it is to make a most searching examination in every case.

It should be kept in mind that the anterior elastic lamina of the cornea, as recently described by Mr. Bowman, is formed of a continuous sheet of homogeneous membrane, perfectly transparent and glossy, and not influenced by acids. When we consider the peculiar nature of this elastic membrane, it will not be difficult to understand how it is that small particles of steel, stone, &c. &c., adhere so firmly to the cornea, although only appearing to float upon its surface. Until an attempt be made to remove them, the surgeon can form no idea of the firmness with which such particles adhere: they are ever to be removed with a light hand, and with every care and gentleness, for the slightest scraping of the cornea produces the most excruciating pain.

Keeping in view the object for which these papers have been written for the *MEDICAL GAZETTE*, it may be well to remind the student of one or two facts connected with the situation and structures of the iris, which is placed within the anterior portion of the globe, behind the cornea, and before the crystalline lens. It must also be remembered that the anterior surface is covered by a part of the aqueous membrane; at its outer margin it is nearly in contact with the cornea, but in the centre they are at some distance from each other; this at once becomes evident when we know that the iris is a flat membrane, and that the cornea projects. The iris, which is soft in texture, and rather pulpy like the choroid, is highly organized, receiving its supply of blood from the two long ciliary arteries, and also from the anterior ciliary vessels; the *former*, entering from behind, pass through the sclerotic, and are continued between it and the choroid, one being on the temporal, the other on the nasal side of the globe; piercing the ciliary ligament, they divide into branches, which embracing the outer margin of the iris, anastomose, so as to form a large vascular halo, from the interior of which branches run towards the pupil, and from these in like manner is formed a third circle at the margin of the pupillary opening. There is a very free communication between the vessels of the iris and those of the choroid and ciliary processes, and also with the minute vessels of the aqueous membrane. The nerves of the iris, which are very numerous, spring for the most part from the lenticular ganglion. Two sets are formed, an inferior and a superior, perforating the sclerotic coat at its posterior aspect. An additional supply is also received from the nasal division of the fifth.

The iris has a most important part to play in the function of vision—regulating the quantity of light admitted to the retina. We feel quite certain that the structure of the iris is muscular, and have ever so demonstrated it, after becoming fully satisfied, with the assistance of a very powerful microscope, of the existence of *certain fibres, distinct* from those formed by the interlacing of blood vessels. Two muscles exist, one an orbicular muscle, surrounding the pupillary opening, and another radiating from the outer circumference of the former, to the outer attachment of the membrane; by the action of the *former*

the pupil is contracted—by the action of the *latter* the pupil is dilated. My late lamented friend, Mr. Tyrrell, informed me that Mr. Dalrymple had shown to him the muscular fibres of the iris under a powerful microscope, and so enabled him to compare it with other muscular fibres as fully to satisfy Mr. Tyrrell that the structures were similar. Bauer, Monro, and Maunoir, have described these muscular bands, as viewed by them under the microscope, and the last-named author has published a series of interesting experiments, which are worthy perusal.

Not wishing longer to intrude upon the province of the teacher of anatomy and the duties of the dissecting-room,* and only with the view of making what further remarks we have to offer more intelligible to our young friends, we notice further, that the veins of the iris, many in number, in part empty themselves into the long ciliary veins, and in part into the vasa vorticosa of the choroid membrane. The iris (fastened in a groove of the ciliary ligament) is lined posteriorly by a dark pigment, to which the name of *uvea* has been given; in the interval between the ciliary processes, the pigment is continuous with that of the choroid coat; a continuation of the aqueous membrane, passing from the anterior surface of the iris through the pupillary aperture, retains the uvea in its place, and expanding behind the iris supports the pigment; behind this are the ciliary processes, and the anterior capsule of the crystalline lens. On the anterior surface of the iris are depicted hues which give to the human eye its variety of colour: sometimes the irides are of a different colour in the same individual,—a fact now and then of importance, for we shall shortly see how soon the colour of this delicate and beautiful membrane becomes dim, or changed, by an attack of the disease we are about to investigate.

In the fœtus, till the seventh month, the pupils are occupied by a fine and delicate membrane, partially transparent, and organised from the blood—

* The student interested in the anatomy and physiology of the iris may consult the writings of Vesalius, Merry, Haller, Rayach, Winslow, Petit, Jourdan, Hovius, Sommering, Bichat, Guthrie, Lawrence, Tyrrell, Middlemore, Wharton Jones, and the *anatomist* W. Zinn. "*Descriptive iconibus illustrata.*" *GAZETTE*, vol. xi Mr. Walker, of M the Iris, will be fo

vessels of the iris. After the seventh month, for the most part, it disappears, but portions of it have been traced in the pupil of the full-grown fœtus.

The circular fibres of the iris derive their contractile power from the nerve of the third pair; the radiating fibres, by whose action the pupil is enlarged, owe their contractile power to nervous fibres springing from the sympathetic in the neck, and which are communicated to the ciliary nerves through the medium of the ophthalmic branch of the fifth and its connections with the carotid plexus.*

Iritis has been described by some authors as resulting from an extension of inflammatory action from some of the external parts of the eye, and also as occurring in patients from an extension of posterior internal inflammations, —*ophthalmia interna posterior*; but the varieties of inflammation of the iris are so variously mingled and complicated with each other, that in every case certain peculiarities of constitution will have to be investigated in forming a diagnosis, pronouncing a prognosis, and deciding upon the proper line of treatment to be pursued. For practical purposes this disease may be divided into three heads:—

- a. Acute iritis,
- β. Chronic iritis,
- γ. Specific iritis;

and each will require a somewhat different treatment.

* Suppose the nerve of the third pair to be paralysed, the pupil would be fixed and dilated. Why? Because the circular fibres of the iris would be paralysed. Consequently, the radiating fibres would have uncontrolled play. What other appearances would be present? Drooping of the upper lid (*ptosis*); for the paralysis of the *levator palpebre* would permit the unrestrained action of the *orbicularis palpebrarum*; and lastly, paralysis of the *internal rectus* and other muscles supplied by the third nerve would permit the unrestrained play of the external rectus, and consequently there would be divergent strabismus. These inquiries might be prolonged to a considerable length; but, as we hope to have an opportunity of investigating some cases of amaurosis, we must postpone them for the present. A curious phenomenon is observed on cutting the sympathetic and vagus in the neck of a dog. Contraction of the pupil takes place. Why? From the radiating fibres of the iris being thereby deprived of their supply of nervous influence, and consequently paralysed, whilst the circular fibres of the iris continue in a state of unrestrained contraction. Inflammatory congestion also takes place, from paralysis of the walls of the blood-vessels of the eye. Contraction of the pupil is not always immediate after a division of the sympathetic in the dog. Dilatation of the pupil sometimes occurs for a brief space, from the irritation communicated to the nervous fibres in their division.

a. *Acute iritis*, arising from exposure to cold, a blow, or those causes generally which give rise to inflammation of the other parts entering into the formation of the eye, commences with pain, often so slight as hardly to attract attention; inability to look towards the light, and slight redness. In a short time these symptoms increase in severity; a dimness of vision creeps over the eye; and as this is one of the first things which creates alarm, the disease may have made considerable progress before we are consulted. The effects of iritis are the result of adhesive inflammation; and, although no distinct serous membrane can be demonstrated on the anterior aspect of the iris, still, like the surfaces of other inflamed organs clearly having a serous covering, lymph is poured out, giving rise to adhesions; but it is worthy remark that the adhesions, ninety-nine times out of a hundred, are between the iris and the capsule of the lens, and not between the iris and the cornea. It is singular that in England we knew nothing of iritis as a distinct disease until the year 1800; and to the labours of a German physician, Dr. Schmidt, the profession are indebted for the first correct description of iritis.

The symptoms of iritis will vary, as a matter of course, in proportion to the extent of the inflammation, and the length of time it has been allowed to remain unchecked in its destroying progress. Pain, slight redness, and intolerance of light, usher in the attack. The degree of pain varies; sometimes, as already stated, it is very slight; sometimes so severe as to amount almost to torture, the forehead, side of the head, and face, suffering also. The globe is exquisitely tender, and the sclerotic coat soon takes on a diseased action. After dinner, or when in the recumbent posture, the distress is augmented; for anything tending to increase the flow of blood to the part adds to the mischief. The pain is now and then slight, but constant. Then you meet with cases where it is more severe at night; in others, there is severe pain all the day, aggravated in nocturnal paroxysms. To the intolerance of light in the first stages of acute iritis is probably owing the closing of the pupil during the advance of the inflammation; for the effusion of lymph fixes it in its condition of smallness and contraction. The *redness* is caused by great

vascularity of the sclerotic. A very slight examination will also enable the learner to detect the difference between the tortuous anastomosing blood-vessels of the conjunctiva, and the zone of fine, delicate, straight, converging pink lines which surround the cornea; for these fine thread-like converging vessels stop short at the edge, or a little before arriving at the edge of the cornea, where they dip through the sclerotic to pass to the iris. We saw a case yesterday in which this was most clearly exhibited.

As the disease pursues its unchecked course, objects become more and more indistinct, and at last the perception of light is altogether lost. The pain now becomes more severe; there is also an increased flow of tears, and a change may be detected in the colour of the iris.

Change in the colour of the iris.—The first thing observed is a loss of its beautiful and glittering transparency: the peculiar polished brightness of the healthy eye is gone; it appears as though it had lost its vitality, and, instead of reflecting, absorbs the rays of light. The pupil is almost closed; and, if the iris were originally of a blue or grey colour, it will have changed to a dirty muddy green; if the colour has been brown or hazel the change is not so apparent. Mr. Tyrrell has observed in the last stages of iritis a reddish brown tinge. Mr. Middlemore has twice seen the iris acquire a red colour, appearing as though rendered beautifully red, by the aid of some subtle injection. In each of these cases the opposite eye was of a blue colour. We have not observed this singular phenomenon in any cases under our own care, but the same appearance has been described by Beer,* Conradi, and Robinson. The alteration in the colour of the iris is caused by the effusion of lymph, which becomes visible upon the surface of the iris. Sometimes it appears freckled and variegated; sometimes a sheet of the same colour is deposited, and sometimes drops† of a yellowish red colour, from the size of a small millet-seed to that of a split pea, may be seen projecting from the pupillary edge.

The effused lymph is on that portion nearest to the pupil, the *annulus minor*;

the *annulus major*, or ciliary portion, appearing dull and cloudy. When the disease has been suffered to go on to another stage, a prominence of a yellow brown colour arises, and bursts; and the matter, falling to the bottom of the anterior chamber, constitutes *hypopyon*.*

All these various changes are more perceptible, as already stated, near the pupillary margin of the iris; and the free, clear, sharp edge of the natural membrane soon is observed to have become rounded and blunt. At the same time, the jet black colour of the pupil begins to fade.

As the lymph continues to be effused into the texture of the iris, its motions become more and more impeded. At first, on bringing the eye near to a window, and causing the light to fall brightly upon it, the motion is observed to be less quick than natural—the pupil contracts, and at length is motionless and fixed. Should an effusion of lymph have been poured out from and upon the iris from behind (that is, from the uvea, or from its pupillary edge), adhesion to the capsule of the crystalline lens is often the result, and consequently the motions of the part are more completely suspended. The pupil itself we have also seen filled up with lymph.

In some cases, if the eye be examined with a very weak light, sufficient to dilate the pupil except at those points where the iris is chained by the effused lymph to the lens, the pupil will present a singularly irregular and angular shape, being more or less deformed, and the circular shape lost. Dilatation of the pupil with belladonna will make this still more visible.

The most important diagnostic marks of iritis may thus be briefly epitomised:—

* *Hypopyon* (ὥδῃ, under, πύον, pus) appears the correct term for this result of inflammation, although sometimes spoken of as *Onyx*. We use the term to signify a collection of pus in the bottom of the anterior chamber, which may even rise to the level of the pupil, and through it flow into the posterior chamber, into which the matter may be first effused, and, accumulating, may run into the anterior chamber. When small, it may be mistaken for *onyx*; but in the great majority of cases the two affections may be distinguished by moving the head from side to side, when the fluid of *hypopyon* will roll about, but that resulting from *onyx* will remain stationary.

* *Lehre von den Augenkrankheiten*, 2 vols. coloured plates. Vienna, 1813 and 1817.

† Mr. Tyrrell speaks of them as tubercles. This is evidently an error.

to the cornea;
time. *Onyx*
a deposit of

a. *Objective symptoms.*—A zone of red vessels passing near the circumference of the cornea; this, at first sight, appears of one uniform dull red colour. On inspection this will be seen to vary, being of a deeper hue as it approaches the cornea, and becoming fainter and fainter as it radiates from the centre towards the circumference. This belt is built up of numerous fasciculi of tiny vessels filled with red blood, in the sclerotic tunic. Of course the halo varies its hues in proportion to the severity of the inflammation, and the stage of the disease at which the examination is made. Then we have a change in the colour of the iris itself, and an alteration in the shape of the pupil, from the iris becoming glued to the surrounding parts.

β. *Subjective symptoms.*—The objective symptoms are clear to the surgeon and the physician; the subjective symptoms can be known only to the patient: they consist of pain, more or less severe, in the eye, the face, and the head; in a dimness which, gradually increasing, terminates in blindness, for if the inflammatory action be not extinguished, it spreads from the pupillary margin to the ciliary; next it runs rapidly onward to the ciliary body: the choroid coat and the retina are soon partakers in the mischief, evidenced by the torturing agony the patient suffers, and too often permanent blindness is the consequence; the beautiful texture of the retina being destroyed irreparably.

During life, the anatomical types of inflammations of the *choroid* and *retina* cannot be directly seen, nor can we observe the congestive external redness proper to them, because the blood-vessels pierce the eyeball at its posterior part; but the appearances after death enable us to infer the anatomical characters of inflammation of these structures with sufficient accuracy.

Some authors describe the distinctive marks by which inflammation of the crystalline capsule may be distinguished from iritis. In the first place, the zone of red vessels so characteristic of iritis is not so apparent; the iris is little altered in colour or in brightness; the pupil remains natural and circular, and there is no intolerance of light. Mr. Middlemore, whose practical writings on the eye will ever command the attention and respect of the profession, tells us—“the inflamed capsule, if examined, will be found slightly opaque in various

parts: it will be irregularly dotted or marbled, and veins or streaks of opaque matter in various degrees of distinctness will be present.” It may be added, that inflammation of the capsule creeps on gradually, and that it is less under the control of mercury than iritis. As it gains progress, the iris, as a matter of course, becomes involved, and it is therefore only in its commencement to be distinguished from iritis. Walther* has described certain vessels in the posterior walls of the capsule radiating from the centre as indicative of inflammation of the part: these, Mr. W. Jones† is satisfied, cannot be, as described and figured by Walther, ramifications of the central artery of the vitreous humour, “for these have become in the developed eye entirely obliterated; where vessels exist, they must be new formations developed in exuded lymph.” (391.)

It is doubtful to me if *crystalline-capsulitis anterior* be frequently a *primary* inflammation, although we know a medical friend who suffered from it, and was under the care of Mr Hey, of Leeds: it appears more reasonable to regard it as an extension of inflammatory action from the iris, ciliary body, or choroid: and this is undoubtedly the case in the majority of cases, although it may now and then exist as a primary disease. The cornea in iritis becomes, during the progress of the disease, hazy, and loses its characteristic polish. It has been said that the aqueous humour becomes turbid from inflammatory action set up in the membrane by which it is secreted;‡ but we have no very sure grounds for this assumption. So long as the cornea remains transparent, the aqueous humour is observed to be bright; and when the cornea becomes dull and opaque, it is altogether impossible to say what is the precise condition of the aqueous humour.

The length to which these remarks have already extended compels us to postpone the examination of the treatment of the acute, chronic, and specific forms of iritis to a future paper.

Sheffield, Feb. 1850.

[To be continued.]

* Walther's *Journal der Chirurgie und Augenheilkunde*, Berlin.

† *Ophthalmic Medicine and Surgery*, pp. 86, 87.

‡ The younger student should keep in mind that the iris is suspended between the cornea and the crystalline lens, and is bathed on either surface by the aqueous humour.

MEDICAL GAZETTE.

FRIDAY, FEBRUARY 8, 1850.

THE recently published Quarterly Return of the Registrar-General shows that, so far as the number of deaths can be taken as a criterion of the state of public health, the results are very favourable. After the great mortality of the summer quarter, occasioned by the malignant cholera, the deaths have so far subsided as to be but very little above the average of previous years, and considerably below the numbers registered in the last quarters of 1846-7. The subjoined table shows the amount of increase and decrease :—

The last quarters of	Number of deaths.
1845	80,681
1846	108,937
1847	103,479
1848	92,447
1849	97,778

The average rate of mortality of the twelve December quarters, from 1838 to 1849 inclusive, was 2·165 per cent. of the population. The rate of mortality in the December quarter of 1849 was 2·181 per cent., and therefore but a slight fraction above the average. The lowest rate of mortality (1·898 per cent.) was observed in the December quarter of 1845: the highest (2·529 per cent.) occurred in the corresponding quarter of 1846.

In order to illustrate the effects of the terrible pestilence, which had almost disappeared at the commencement of the last quarter, it will be necessary to compare the number of deaths registered in different years. We shall thus arrive at a correct knowledge of the influence of malignant cholera on the annual rate of mortality. The deaths registered in the five years respectively were as follows :—

Years.	Number of Deaths.
1845	349,366
1846	390,315
1847	423,304
1848	400,060
1849	441,458

It will thus be perceived that of this quinquennial series, 1849, the year of cholera, was the most fatal, the deaths in that year having exceeded the number registered in the least fatal year (1845) by 92,092.

The average annual mortality of the ten years, from 1838 to 1847, was 2·213 per cent. of the population; of the twelve years, from 1838 to 1849, 2·243 per cent. The annual mortality was lowest in the year 1845, when it was 2·08 per cent., or 1 in 48 of the population: it was highest in the cholera year 1849, when it reached 2·493 per cent., or amounted to 1 in 40 of the population. The sudden rise in the number of deaths in 1846 was owing to the prevalence of diarrhoea and English cholera during the summer of that year. These were succeeded by influenza at the close of 1847 and the beginning of 1848. The malignant cholera first made its appearance in October 1848, but only spread to an alarming extent during the months of July, August, and September, 1849. It slowly subsided in October.

It is observed in this return that, notwithstanding the great fatality produced by epidemic cholera in England in 1849, the rate of mortality for the year scarcely exceeded that of France and Sweden for ordinary years, and was much less than the annual average mortality of Saxony, Prussia, Italy, Austria, and Russia. We may also remark, as a further illustration of the influence of climate, that the usual rate of mortality at some British stations on the coast of Africa, and in the West Indies, is more than double of that which was observed during the cholera year.

The quarterly mortality in the metropolis calls for but little notice. The total deaths in the three months were 12,818, of which about one-fourth, or 3227, were occasioned by diseases of the zymotic class. The deaths from cholera were 494, of which 464 occurred in October, and the remainder since that time. In order that we may preserve the record of the disappearance of this malignant pestilence, we subjoin a table; premising that the deaths from cholera in the last week of September were 434.

Week ending	Deaths.	Total.
Oct. 6 . . .	288	
13 . . .	110	
20 . . .	41	
27 . . .	25	In Oct. 464
Nov. 3 . . .	11	
10 . . .	6	
17 . . .	8	
24 . . .	2	In Nov. 28
Dec. 1 . . .	1	
8 . . .	0	
15 . . .	1	
22 . . .	1	
29 . . .	0	In Dec. 2

Total deaths from cholera during the December quarter 494

The deaths in the metropolis from a few other zymotic diseases may be recorded:—

	Deaths.
Small-pox	99
Measles	398
Scarlatina	486
Hooping-cough	273

These numbers are below the average. Diarrhoea during the same period proved fatal to 482 persons.

The subject of child-bed mortality in different places has recently excited some discussion. The deaths of females in and after childbirth, where death could be safely ascribed to that condition, are stated to have been 116, or one death of the mother to 1168 children born. The Registrar-General states that this mortality is much lower than it has been at the same season in London, or perhaps in any other city.

The summary of the causes of death in the provinces presents no features of interest.

Reviews.

On Stricture of the Urethra and Fistula in Perineo. By JAMES SYME, F.R.S.E., Professor of Clinical Surgery in the University of Edinburgh, &c. &c. 8vo. pp. 72. Edinburgh: Sutherland and Knox. London: Simpkin and Marshall. 1849.

SUFFICIENT, it may be supposed, has been written and said concerning stricture of the urethra to have exhausted the subject, and leave no single point untouched, in its history, symptoms causes, or treatment; but Mr. Syme thinks otherwise, and not without reason, since he has something very different to most authors to tell us regarding its treatment. Mr. Syme's reputation is a guarantee that this shall not be a mere speculative novelty; and accordingly he states his views as the result of experience, and his method of cure, in the form of practical illustrations. These consist in a series of eleven cases, in which Mr. Syme's method of cure was completely successful. We extract the author's account of the latter in his own words:—

"The patient should be brought to the edge of his bed, and have his limbs supported by two assistants, one of them standing on each side. A grooved director, slightly curved, and small enough to pass readily through the stricture, is next introduced, and confided to one of the assistants. The surgeon sitting, or kneeling on one knee, now makes an incision in the middle line of the perineum or penis, wherever the stricture is seated. It should be about an inch and a half in length, and extend through the integuments, together with the subjacent textures exterior to the urethra. The operator then, taking the handle of the director in his left, and the knife, which should be a small straight bistoury, in his right hand, feels, with his fore-finger guiding the blade, for the director, and pushes the point into the groove behind, or on the bladder side of the stricture; runs the knife forward, so as to divide the whole of the thickened texture at the contracted part of the canal, and withdraws the director. Finally, a No. 7 or 8 silver catheter is introduced

into the bladder, and retained by a suitable arrangement of tapes, with a plug to prevent trouble from the discharge of urine" (p. 41).

The cases which illustrate this practice present a most favourable report of the results of the operation, which it seems has been crowned with complete success whenever it has been had recourse to. The author reviews also the other means which are employed to remove stricture—dilatation, cauterization, internal incision, and incision of the perineum in search of the urethra deemed impermeable. The ill consequences which have often followed the passing of a bougie or catheter are brought forward, and certainly deserve more consideration than is sometimes bestowed upon them.

Mr. Syme observes, that all the objections to the use of bougies obtain with tenfold force against the employment of caustics. Mr. Syme "does not hesitate to express his conviction that a real organic stricture cannot be removed by caustic;" and concludes that in alleged cures there was no stricture in existence.

Internal incisions Mr. Syme speaks of as affording only temporary relief.

The operation of cutting down into the perineum in search of the obstructed canal, without any further guide than the point of a catheter, introduced not through, but merely down to the contracted part, incurs not only the risk of establishing an imperfect canal, but also the immediate hazard of failure of the introduction of a catheter into the bladder, which would expose the patient to nearly certain death from extravasation of urine.

Mr. Syme lastly contrasts these operations with the plan he recommends, and which he advances as a "complete remedy of the disease in its most inveterate and obstinate form; and one which, even in cases of less obstinacy, is preferable to dilatation, as affording relief more speedily, permanently, and safely." (p. 58.)

The author's brief remarks on *Fistula in Perineo* are addressed to the correction of Sir B. Brodie's opinion of the origin of those abscesses by the escape of urine or fæces from the urethra or rectum. The abscess, according to Mr. Syme, has its origin in local circumscribed inflammation, and the communication with either canal is secondary.

This explanation is in accordance with the history of these cases, and is therefore the more natural and rational.

We need scarcely add a word of praise on this little volume; but we cannot withhold our opinion that it contains more useful practical information in reference to stricture of the urethra than many other works of much greater pretension.

Pathology of the Human Eye. By JOHN DALRYMPLE, F.R.C.S. &c. Fasciculi III. and IV. London: Churchill. 1850.

WE have now before us the third and fourth fasciculi of this excellent publication. The third fasciculus contains twenty-one beautifully-coloured drawings, illustrative of *purulent ophthalmia* in infants and adults. The delicacy and fidelity with which these are executed are quite remarkable. In no work on diseases of the eye have we seen any illustrations which can be compared with them. The minutely-coloured vessels of the conjunctiva bear magnifying with a high power, and then it is that the delicacy of finish becomes really apparent. The consequences of ophthalmia are well depicted. The fourth fasciculus includes the various stages of *conjunctivitis* (six illustrations), as well as *Ulcers* of the cornea, inflammation of that membrane and the sclerotic coat, with the usual sequelæ, comprising eighteen coloured drawings. The remarks appended to each series of plates are concise and practical.

Mr. Dalrymple's work is admirably calculated to aid diagnosis in ophthalmic diseases; and on this ground we recommend it to the notice of those of our readers who take an interest in the progress of ophthalmic surgery.

Surgical Anatomy. By JOSEPH MAC-LISE, Surgeon. Fasciculi IV. and V. London: Churchill. 1850.

WE are glad to welcome two more parts of this valuable series of surgical plates, and to perceive that the author has, since the appearance of the last fasciculus, been very industriously occupied. The fourth fasciculus contains three plates on the relations of the

principal blood-vessels of the viscera, of the thoraco-abdominal cavity, the relation of these vessels to the osseous skeleton, as well as the relation of the internal parts to the external surface of the body. The fourth plate in this fasciculus, and the whole of the four plates in the fifth fasciculus, contain illustrations of the surgical anatomy of the parts concerned in *Inguinal* and *Femoral Hernia*. The fifth fasciculus comprises no fewer than ten large and well-finished drawings referring to the diagnosis of herniæ—the application of the taxis, and the operation for strangulated hernia. The arteries and veins alone are coloured: the other structures are indicated by appropriate shading. The work is wonderfully cheap at five shillings a fasciculus; and, unless extensively patronised, as it deserves to be, by student and practitioner, it can leave but a small dividend for the artist, editor, and publisher. The great excellence of the work is to be ascribed to the anatomist and draughtsman being one and the same person. The commentaries to each plate are good and practical.

The London and Provincial Medical Directory, 1850, pp. 576. London: Churchill.

THIS useful work has undergone improvements yearly since its first appearance; and in the form in which it is now before us, it appears to be as perfect as a Medical Register, unsupported by an Act of Parliament, can be made. The several divisions of the Directory are arranged in much the same order as in the previous edition. There appears to be a greater degree of accuracy in the enumeration of the names and qualifications of professional men. The editors, in carrying out their plan, have laid down a certain code of rules to which we think no professional man can reasonably object. The local lists of the counties, and the street list of the metropolis, will be found most serviceable as a guide to the residence and qualification of every practitioner.

One addition we notice, which will render the work acceptable to the medical student. The cost of medical education at each metropolitan hospital school is given in a concise table. This, with the rules and regulations of all the Colleges and Halls in the United King-

dom, renders it a student's volume. In short, it is a work which should be in the hands of every professional man.

Proceedings of Societies.

WESTMINSTER MEDICAL SOCIETY.

MR. HIRD, PRESIDENT.

Saturday Jan. 12, 1850.

Primary Venereal Ulcer.

MR. B. TRAVERS read a paper descriptive of certain forms of venereal ulcer, which he had found to be incurable by the use of mercury. They had occurred in the persons of young men of delicate habit and feeble circulation, but in whom there was, for the most part, no reason for suspecting the presence of scrofula or other causes likely to affect the operation of the remedy in a constitutional sense. Besides, it had been noticed of the strumous habit, that it bears the moderate operation of mercury very well. Mr. Travers related the particulars of a case in which a young shopman had been ill for a period of six months, having applied to a surgeon, ten days after intercourse, for the cure of an ulcer upon the glans penis, having all the characters of a specific sore, as regarded its margin and surface. Mercury was exhibited perseveringly; also the hydriodate of potash, without affecting the system or altering the character of the local disease. Mr. Travers saw the party in Nov. 1849; he had then been suffering since May. He felt so satisfied that the ulcer was venereal, that he directed a fresh employment of mercury, which was given to pytalism, in the form of Plummer's pill, but without effecting any material change for the better. Eventually the young man was cured completely by the exhibition of ten drops of tincture of muriate of iron, twice a day, and an application of cold water to the part. In commenting upon this case, Mr. Travers avowed himself a firm believer in the existence of a poison requiring mercury for its cure, and of a true unity of type, whatever the local manifestation might be; but he submitted that the disease has undergone so marked a change, and has become so mild in its progress during the last fifty years, that the Hunterian definition, and the method of cure by mercurialization, no longer apply in numberless instances. He proceeded to challenge the experience of the members of the Society as to their recognition of any signs, whether local or constitutional, whereby, in doubtful cases,

one might at once decide, with safety to the patient, as to the use of mercury or its omission. At present, the rule seems to be that we should await the teaching of the remedy under such circumstances; but this, though a sure, is a roundabout mode of arriving at an opinion, and we should acquire a more speedy and direct diagnosis, which Mr. Travers thinks may yet be attained, by patient and connected observation. The author proceeded to express his entire distrust of such terms as gonorrhoeal or pseudo-syphilitic diseases, as applied to secondary forms of lues; and, in conclusion, insisted earnestly upon the necessity of taking a very decided course in reference to the exhibition of mercury, or its total omission. The profession need to be reminded of this, because cases still occur, every now and then, of an irremediable cachexia induced by the irritating and wasting effects of mercury on the one hand, and the unrestrained progress of the poison on the other. In the author's experience, the limpet-shell crust upon the surface, many intractable forms of local ulceration and bony caries, belong not to the disease, but to the improper use of mercury.

Saturday, Jan. 19.

New Operation for Ovarian Dropsy.

Mr. I. B. BROWN brought before the fellows of the Society a new operation, which he had lately performed in ovarian dropsy. In doing so, he was particularly anxious to be understood as never having condemned operative surgery for the relief or cure of this disease; he always considered that his plan of pressure should be first tried, wherever applicable, and after that and other remedies had been unsuccessful, it was not only justifiable, but advisable, to have recourse to operation: but the nature of that operation was the great point. He believed that the plan he was now about to submit to the Society, coupled with another which he would also mention, would be found of practical utility, and be of less danger to the patient than the formidable operation for ovariectomy. He would not, on this occasion, attempt to enter into the very interesting case in which this operation was performed; he would do so fully hereafter, in the series of his cases which he from time to time should place before the profession, whether successful or unsuccessful: he would merely remark, that this patient was considered by himself, and also by Mr. Fergusson, as having only a few days of life remaining, and that this operation held out reasonable hopes of prolonging her life, if not even of arresting effectually the disease itself. The

operation was successful in prolonging her life for some weeks, and its whole course clearly showed that in cases free from other serious disease this operation was calculated to cure many cases of ovarian dropsy. He (Mr. Brown) observed that this operation differed materially from Mr. Bainbridge's, inasmuch as that performed by him required the patient to be in the prone position for many months; whereas this enabled the patient to be on her back, on water cushions, which added very greatly to her comfort, and also enabled the nurse to dress and clean the wounds without fatigue or annoyance to the patient, as well as enabled the surgeon to apply pressure over the cyst, by placing strips of plaster from the opposite side of the abdomen, and bringing them firmly over beyond the incision and open wound. He placed the patient on the edge of the bed, in the horizontal posture, and then drawing an imaginary line from the umbilicus to the superior spinous process of the ilium, and dividing it into thirds, he made an oblique incision from above downwards, and from within outwards, through part of the middle third and into the outer third.

The oblique incision was about three inches. He (Mr. Brown) dissected carefully through the muscles and fascia down to the peritonæum; through this could be seen the whitish shining coat of the cyst: he then made another smaller incision at right angles to the first, and dissected down to the peritonæum; this incision was about an inch and a half in length. At the point of the angle a large-sized trocar was introduced, and the fluid drawn off. The canula being kept in, the peritonæum was divided, and reflected back; then the cyst was stitched by sutures to the aponeurotic tendon of the external abdominal oblique muscle, carefully avoiding the other structures; these sutures were nine in number, and were so arranged as to secure completely the cyst on all sides to the tendon of the muscle, and prevent any escape of the fluid from the cyst into the peritoneal cavity; the canula was now withdrawn, and by means of a pair of scissors the cyst was divided between the sutures: a pledget of lint, soaked in oil, was then introduced into the wound, and changed occasionally, and some adhesive straps placed across the abdomen, to keep up gentle pressure. Not a single bad symptom, referrible to the operation, followed. The second operation was performed in a similar manner, and in the same position, but a piece of the cyst was cut out, the fluid being first evacuated, and then the remaining portion of the cyst was allowed to return to the peritoneal cavity, the external wound being closed; pressure

was applied over the whole abdomen by means of adhesive strapping and flannel bandage. This operation was intended to imitate spontaneous rupture, and was only to be recommended where the fluid was of an irritating character.

Premature Labour, and Symptoms similar to those of Irritant Poisoning, induced by Excessive Indulgence in Ardent Spirits.
By Dr. CORMACK.

After briefly referring to a case of poisoning by alcohol, detailed in "Taylor's Medical Jurisprudence," and to a paper by the late Dr. Nicol, of Inverness, in the *Edinburgh Monthly Journal* for June, 1844, in which are given the post-mortem appearances in a fatal case of rapid poisoning by whisky, Dr. Cormack gave an account of a case which had recently occurred to him. The leading particulars are embraced in the following abstract. Dr. Cormack was sent for in urgent haste during the night to a lady in premature labour, and affected with violent vomiting and extreme depression. Upon examination, a long loop of the funis was found protruding from the vagina, and under the nates. The os uteri was so slightly dilated as not to admit the finger without some degree of difficulty; but a head presentation was readily recognised. The patient was a perfect stranger to Dr. Cormack, but he has been able, from authentic sources, to obtain a complete account of her medical history. Previous to her marriage, six years ago, she was subject to the globus hystericus, with associated sensations of agony and impending suffocation. For these attacks stimulants were freely prescribed by a physician, and soon she only found relief from taking a glass of brandy. Under this system she acquired a craving for stimulants, which has on several occasions been irrepressible, even though since marriage there has not been the slightest return of the hysterical seizures. On four occasions the excess of stimulants has brought on dangerous illnesses, on two of which the predominating symptoms were those of delirium tremens; and on the two other occasions they seem to have been such as characterise gastro-enteritis. Several times she has had epileptiform seizures immediately after taking a large quantity of ardent spirits. When abstinent her health is excellent: and the potation impulse is often in abeyance for a very long period. She has had three abortions at very early periods, and one miscarriage, about the seventh month, three years ago. At that time she seems to have been in great jeopardy from hæmorrhage, as it appears that she was in labour for twenty-four hours, and the gentleman in attendance deemed it necessary to call in

Dr. F. Ramsbotham. The most urgent symptom which Dr. Cormack found on his arrival was extreme depression. There was some transient mental obscurance, characterized by delirious and incoherent talking about her ordinary affairs, and she several times addressed herself to persons who were not present. The pulse was rapid, very compressible, and for minutes at a time imperceptible at the wrist. She had during the day been taking regularly, every three hours, as prescribed by her medical attendant, a saline effervescing draught, but the sickness and gastric pains had gone on increasing. Dr. Cormack applied sinapisms to the pit of the stomach, and administered strong coffee with brandy, and some of the doses, which were small in bulk, remained down for nearly ten minutes, and produced a slight reaction. With this improvement, considerable oozing of blood came on from the uterus, and as the hæmorrhage increased, and the vomiting and depression became really alarming, Dr. Cormack resolved to hasten delivery by such means as the circumstances might require, and, as a first measure, he had a turpentine enema administered. Very soon the heart's action, the respiration, and the skin, gave evidence of the improved condition of the patient; and the expulsive efforts of the uterus became regular and energetic. The vomitive straining, however, continued with great severity. In about an hour and a half from the administration of the turpentine enema, there was born a dead fetus of about the sixth month. During and after the birth, there was scarcely, if at all, an unusual amount of hæmorrhage; but in her it seriously affected the circulation, and occasioned some anxiety from impending syncope. Dr. Cormack removed the placenta with the hand, and, through the abdominal parietes, firmly grasped the uterine tumor, till it had become so regular and so reduced in size, as to prevent the risk of further hæmorrhage. A well-padded and carefully adjusted abdominal bandage was then applied. After about twenty minutes, respite the sickness and depression returned, and having no creasote with him, Dr. Cormack administered a pill of one grain of solid opium. It soon afterwards came up. One drachm of the Edinburgh solution of the muriate of morphia was then given, and with better effect. About seven A.M., Dr. Cormack left her calmer, of natural warmth, and altogether in a more satisfactory state, though constantly roused from broken and delirious slumbers by violent attacks of retching. At ten o'clock the sickness was less harassing. At this time she took a pill containing two drops of creasote, made up with crumb of bread; after which she

had no vomiting for two hours, when it was re-excited by attempting to take a little cold beef-tea. Upon examining the interior of the mouth, there were found intense general stomatitis, considerable glossitis, (as evinced by the swollen and painful condition of the tongue), and a red and turgid state of the pharynx as far down as the eye could reach. It was now ascertained that in the ejecta there had been a good deal of that sort of matter usually compared to coffee-grounds, and which is often thrown up in the congestive forms of tropical fevers, and which is blood exuded into, and altered by, the stomach. During six days she went on improving very slowly, but without any backgoing, and on the seventh she could retain tepid food in the liquid form, without pain or nausea being excited. During these six days the quantity of aliment taken was infinitesimally small, not exceeding, Dr. Cormack would venture to affirm, what an infant of a year old would take at a single meal; it consisted of a few spoonfuls of tepid beef-tea, with a solution of isinglass and gum arabic. It was only at first, immediately after taking a dose of creasote mixture, that any ingesta could be retained. This mixture, in which the creasote was largely diluted, was regularly taken after the first morning, and was the only medicament prescribed. On the third and fifth days the bowels were moved by tepid water enema. It was impossible to ascertain the exact quantity of stimulants which had been taken; but it was established, that during the four or five days before Dr. Cormack first saw her, she had taken no food, but had consumed clandestinely about twenty shillings worth of various stimulant drinks, including gin, brandy, wine, and ale. In conclusion, Dr. Cormack stated that he thought the principal points of interest in this case were the three following:—1. The extreme nervous depression caused by the alcoholic stimulants was nearly converted into irrecoverable prostration, by an inconsiderable amount of hæmorrhage. 2. The satisfactory result of the simple and easy means used for inducing uterine contraction; these being, in the first instance, the turpentine enema, to cause expulsion of the fœtus; and subsequently, grasping the uterine tumour, to arrest and prevent hæmorrhage. 3. The satisfactory recovery under the combined influence of abstinence, and the specific effect of the creasote upon the vomiting, and as a general sedative of the morbidly-excited mucous membrane, and nerves of the alimentary canal, and through them, of the system generally.

MEDICAL SOCIETY OF LONDON.

Monday, Jan. 14, 1850.

MR. HANCOCK, PRESIDENT.

The Auriscope—Unnecessary Operations on the Throat.

MR. HARVEY exhibited an instrument to the Society for the purpose of testing the condition of the Eustachian passages. The instrument, which was a modification of Kramer's auriscope, had been used in a great number of cases by Mr. Harvey, and the result of that experience had been his conviction that catheterism of the tube was most frequently resorted to where no such necessity existed. The instrument resembled a flexible stethoscope, but the bell-end was sufficiently large to cover the auricle of the patient; the other end of the instrument was tube-shaped, and this being placed in the ear of the surgeon, the condition of the Eustachian passage was indicated by the patient taking a forced expiration. If patent, the volume was heard to rush through the tube: if obstructed, no such indication was presented. The advantages of this simple but efficient mode of diagnosis were summed up as follows:—First, it prevented the unnecessary use of the Eustachian catheter in cases of chronic disease, in which an inflammatory condition of the tube, or other causes, rendered the use of the catheter positively injurious. Secondly, it would show whether enlargement of the tonsil had really had any influence in the production of deafness—a mistake too frequently made, and tending to unnecessary extirpation. In a conversation which followed, several fellows took part: the question of how far the enlargement of the tonsil acted as an obstruction of the end of the Eustachian tube was broached; and while, on the one hand, it was contended that such enlargement did produce occlusion, it was shown, on the other, that the pathological anatomy of these bodies proved the contrary. Reference was also made, in an especial manner, to a great number of facts, which proved that the excision of almost the entire tonsil afforded no relief to the infirmity. In addition to this, cases were cited by some of the fellows, in which the operation of removal had been followed by very unpleasant and even serious consequences. The more common form of inconvenience was a constant dryness of the fauces, and an enlargement of the mucous follicles of the pharynx. Patients repeatedly complained of the result. The wholesale system of cutting away important organs as an imaginary means of curing disease, was strongly reprobated by several gentlemen present.

LIVERPOOL MEDICAL AND PATHOLOGICAL SOCIETY.

Jan. 10th, 1850.

Cancer of several Abdominal Viscera.

DR. NEVINS.

THE patient, a woman aged 70 years, had enjoyed uninterrupted good health, of which she often boasted, until a month prior to her death. She then had an attack of diarrhoea, which was easily checked, but was followed by constipation, vomiting, and pain in the epigastrium. Copious enemata removed the constipation, and occasional gentle aperients kept the bowels regular; but the vomiting and pain continued without intermission. There was a hard tumor constantly present, a little to the right of the epigastrium, in which the pain was located. Opiates, with mild treatment, a few leeches and blistering, were employed in vain: the patient rapidly emaciated, and died in about a month.

Post-mortem.—A large deep ulcer, about three inches in diameter, was found in the stomach, extending to but not involving the pylorus itself. The portion of the stomach corresponding with it was very much thickened and hardened, and the lesser omentum was in a state of almost cartilaginous hardness. The stomach and liver were inseparably united by cancerous omentum, and the large omentum was also implicated, but only to a small extent. The mesenteric glands were not extensively diseased. Throughout the liver were masses of cancerous structure, varying in size from a walnut to a split orange, and in one of the kidneys was a single small deposit, which, hard externally, had softened internally to the consistence of cerebriform cancer. The spleen was not larger than a split orange, but was not cancerous.

It was remarkable in this case that such extensive disease should have existed so long without producing constitutional symptoms, for it is scarcely credible that the disease found after death could have been developed entirely during the month of illness.

Renal Abscess. DR. WATSON.

A woman, in her second labour, had flooding, from which she recovered at the time, but did not regain perfect health. After the delivery she had severe hypogastric pains, which were relieved by simple treatment. During her pregnancy she had some distressing symptoms of uneasiness, which were attributed to the pregnancy, and did not receive much attention.

When called to see her four months after

confinement, Dr. Watson found her almost moribund, with a very large tumor in the abdomen passing down towards the pelvis. The bladder was not apparently affected, but she was too ill to be much examined. The course and situation of the rectum were indicated even during life by a projection visible through the abdominal integuments. She died in two or three days.

Post-mortem.—The chief point of interest was the immense size of the left kidney, which projected into the pelvis behind the rectum. It was lobulated, and contained four pints of pus lodged in immense cavities in the kidney.

Hare Lip.

DR. NOTTINGHAM brought two children to illustrate the advantage of operating early in this malformation. In one, a child about two years old, when operated upon the disfigurement was about as great as is usual after the operation; but in the other, operated upon when about three months old, scarcely a scar was visible. He considered it of especial importance when the hare lip was double, because the middle part grows less quickly than the side ones, and therefore the disproportion between them is greater as time advances, and the disfigurement is great in proportion.

Adherent Pericardium. DR. DESMOND.

A drunken woman, aged 27 years, died. She had no symptom of heart disease during life, nor any unusual stethoscopic signs, and she never had rheumatism. On dissection both the serous layers of the pericardium were so closely united throughout as to be inseparable.

In this case there had been practically no pericardium, and yet the functions of the heart had not been impeded.

Cirrhosis of the Liver. DR. CAMERON.

This was an ordinary specimen of the disease in a drunken woman who died of dropsy. She never had any jaundice or deficient biliary secretion, there was no anasarca, and scarcely even the most trifling constitutional disturbance or pain previous to the occurrence of the dropsy, of which she died four or five months after its first appearance.

James Philips, aged 5 years, was attacked with scarlet fever on the 6th July last.

The efflorescence continued for the usual period, and then declined, without any particular disturbance of the system. It was during the process of cuticular desquamation, and seventeen days from the first appearance of the eruption, that an oedema of the face, hands, and ankles took place.

This terminated in a few days in general anasarca and ascites, accompanied with acute febrile symptoms.

An inflammation and suppuration of the cervical glands now supervened: the matter was let out, and consisted of curdy serous fluid. The abscess of the right side of the neck got well in a few days; that on the left side continued to discharge large quantities of watery matter. In the second week after the abscess on the left side of the neck had been opened, the child began to complain of pain in the left elbow, which on examination presented a pale circumscribed elastic swelling, apparently confined to the articulation: on the third day fluctuation became evident; the tumefaction of the joint increased to an enormous size; and on rotating the hand a loud harsh crepitus was heard. The shoulder and ankle of the same side were also painful, pale, and swollen; but the morbid action in these never attained the same intensity as in the elbow. The child died from the irritative fever on the 14th August.

On the examination of the body fourteen hours after death, the elbow-joint presented a frightful extent of disease: the ligaments and articular cartilages were entirely destroyed, and the joint was filled with thin curdy and serous matter. The ligaments and cartilages of the shoulder were intact, and contained serous matter, flocculent, and less glairy than synovia.

REMARKS.—It would seem from the cursory manner in which inflammation of the joints following scarlet fever is noticed by some of the best writers on the subject, that synovitis is one of the rarer secondary complications caused by the disease. The most interesting point for consideration in this case is, whether the purulent deposit in the joint was the result of inflammation in the part, or of absorption of pus by the veins (phlebitis). The writer of the article on scarlatina in the *Cyclopædia of Medicine*, says, "More rarely still, the disease is followed by purulent deposits in the large joints, or by gangrene of some portion of the extremities." He adds, "When purulent deposits take place in the joints, a morbid condition observed in the London Fever Hospital, there are rarely marks of inflammation in the synovial membrane."

Dr. TWEDIE is inclined to think that the pus deposited in the joints is not the consequence of inflammatory action, but that it is deposited from the blood in the same way as is sometimes observed in other parts of the body.

Dr. GREGORY seems to express a similar opinion.

Dr. WATSON (*Principles and Practice of Physic*) speaks of abscesses formed in and

about the joints, attended with destruction of the articular cartilages, as the result of phlebitis consequent on scarlet fever with ulceration of the throat.

In the case which has been detailed we can scarcely, however, suppose that the pus was simply deposited from the blood without local inflammation, when we regard the extent of disorganisation which ensued before death; and it seems more reasonable to think that the scarlatina excited synovitis in a scrofulous constitution.

In allusion to the very short time required for the great disorganisation of the joint in this case, Dr. Nevins mentioned a case on the *Dreadnought*, in which the articular cartilages of the knee-joint were partially destroyed on the 5th day after inflammation had commenced there, during an attack of erysipelas, from which the patient died.

Mr. HIGGINSON mentioned a case in the Richmond Hospital. The urethra was divided by incision for the cure of stricture; irritation followed, and death in a few days. Both knee-joints were found full of pus, though no disease of the joints existed prior to the operation.

Dr. GEE had noticed that in some cases of multiple abscess there was not much pain.

Dr. NOTTINGHAM said it was not uncommon for serous inflammations to terminate in articular abscesses.

Mr. BANNER said the affection was most common when the patient had been previously debilitated. A man had phlebitis of the leg, but was recovering. Pain commenced in the knee-joint, and matter rapidly formed; very soon after it formed in the elbow; he then lost his sight, and the eye was protruded; and on his death, which occurred soon after, a large collection of matter was found behind the eye.

ACADEMY OF MEDICINE, PARIS.

Jan. 21, 1850.

PRESIDENT, M. BRIGHTHAU.

The Alimentary Employment of Gelatin.

M. BERARD read in his own name, and those of his colleagues MM. Chevallier and Gibert, the official report in answer to a ministerial letter received during the last session, respecting the employment of gelatin as an article of food. The conclusions of the commission went to show that gelatin does not contain the nutritive principles of animal food, and therefore that it cannot be substituted for meat; that in many persons its use produces derangement of the digestive organs, and hence, in

a hygienic point of view, its employment is unadvisable. Lastly, the commission discourages the construction of apparatus for the extensive extraction of this substance from bones, &c., for public purposes. x

. Gelatin it is well known contains no sulphur: it is, therefore, deficient in a principle which is uniformly associated with nitrogen in all really nutritious articles of food.

SURGICAL SOCIETY OF PARIS.

Jan. 24, 1850.

PRESIDENT, M. DEGUISE, *père*.

Continuation of the discussion on Tracheotomy
—*Ranula: unsuccessful attempt to remove the sublingual cyst.*

M. MONOD related a case which showed that foreign bodies introduced into the trachea are not always expelled by the effort of coughing, after the operation has been performed. M. Monod also mentioned as one of the causes of the failure of tracheotomy in croup, that the infant is too often unable to expel the false membrane which lines the trachea and bronchi, and which causes congestion of the lungs, and death. M. Monod suggested theoretically, that as the obstruction to the rejection of these false membranes occurs during expiration, and not during inspiration, a canula might be so contrived that its orifice should close during expiration, to permit the expectoration of the membrane during coughing.

M. GUERSANT stated that the patient to whom he had referred at the previous meeting was improving in every respect, and the inconvenience attending deglutition had much decreased. The congestion of the lung alluded to by M. Monod was referred by M. Guersant to the debilitating influence of previous antiphlogistic treatment.

M. MORELLE-LAVALLÉE mentioned that a case was recorded in the Transactions of the Society in which, after the operation, performed by M. Robert, the same accidents occurred as had been stated by M. Guersant.

M. DEMARGUAY inquired of M. Guersant whether in cases where he had obtained cures he considered that the false membranes extended to the bronchi.

M. GUERSANT replied that this point was difficult to decide, but that the existence thereof did not constitute a contra-indication for the operation. M. Guersant related several cases in which false membranes had been expelled from the bronchi after the successful performance of the operation.

M. LARREY stated that he had made the effort in a case of *ranula* to remove the cyst entirely, but that, notwithstanding the utmost care, the cyst had been opened. The fluid which escaped was about a hundred and fifty grains in quantity, and, according to the analysis of M. Poggiale, was composed of pus, salts, and inorganic matters of the blood. x

ACADEMY OF SCIENCES, PARIS.

Jan. 21, 1850.

PRESIDENT, M. DUPREY.

Treatment of Neuralgia and Articular Rheumatism by Cold Douches and Sweatings—Physiological Action of Ether and Chloroform.

M. FLEURY transmitted the successful results of the employment of cold douche and sweating in forty-six cases, as follows—

1. Five patients with acute neuralgia, cured in three sittings.
2. Eleven cases of acute muscular rheumatism.
3. Four patients suffering under chronic neuralgia, cured in from three to five months.
4. Three patients who had laboured under general nervous disorder from five to fifteen years, cured in from three to eighteen months.
5. Twenty-three cases of chronic rheumatism of several years duration, cured on an average in three months.

M. EDOUARD ROBIN communicated his researches on the physiological action of anæsthetic agents, whence he concludes, that when received into the circulation in sufficient quantity, ether and chloroform prevent the combustion of the blood and its conversion from venous to arterial, and that their anæsthetic effects proceed from that condition, constitute a true asphyxia. That this effect is owing to the power which these agents possess of arresting processes of decomposition in the dead body, whereby they arrest the process of oxygenation in the living also. x

STATISTICAL SOCIETY OF LONDON.

Jan. 21, 1850.

LIEUT.-COLONEL W. H. SYKES, V.P.,
in the Chair.

MR. ALEXANDER MACLAREN read a paper on the

Origin and Spread of Cholera in the Eighth District of Plympton St. Mary, Devon.

This district was described as altogether healthful, and possessing no disease peculiar to soil, climate, or situation; the duration of life, too, was below the average of England and Wales. The sanitary condition of Noss Mayo was especially detained under consideration, from the circumstances that cholera first made its appearance in that part of the district; that five-eighths of the entire population were attacked by some grade of the distemper, and the resulting mortality was one in eight. Tabular record proves that the disease could not have originated from an excess of causes producing general unhealthiness. It was proved from the facts of the case to have been imported by a French vessel from Dieppe, and, through its first victims, thence communicated to the locality by contagion or infection, as proved by the related sequence of the first cases, all of which were associated by household and social connections. In addition to the two usual forms of the distemper, diarrhoea and algide cholera, another grade, distinguished by Mr. Mac-laren as the "gastro-choleric irritation," was remarked upon as having extensively prevailed. In describing this grade, he mentioned it as having been often confounded with influenza, and pointed out their distinctions and presumed relations. A tabular arrangement exhibited the various grades of the disease, and the comparative liability of different ages to attack and death. The data for eliminating facts relative to age were necessarily small, as the commissioners of public health had been unable to furnish any from the mass of their materials; nevertheless, Mr. Mac-laren's inquiry illustrated the advantage of adopting the statistical method of submitting to numerical tests the various and disputed facts relative to cholera.

ROYAL INSTITUTION.

February 1, 1850.

On the Electricity of the Air. By PROFESSOR FARADAY.

PROFESSOR FARADAY this evening introduced and expounded the hypothesis of M. Pelletier, respecting the electrical relations of the earth and its atmosphere to the planetary space in which it moves.

The mode in which the electricity of the atmosphere was discovered by M. Pelletier and Quetelet, was shown by Dr. Faraday experimentally. The instrument employed by these investigators was a brass globe placed on a thin metallic stem, to which is affixed a delicate galvanometer needle, which indicates, by a minute measurement

in degrees, the amount of electricity obtained. This instrument was used by the experimentalists on the summits of high buildings, where it was above every surrounding object. The method formerly adopted was to employ for this purpose a long metallic rod, furnished with points which projected into the air to be examined. M. Pelletier's mode gives the quantity and the kind with certainty, while the old method furnishes uncertain and often contradictory results.

Dr. Faraday illustrated, by enlarged models, the influence of various degrees of elevation on M. Pelletier's electrometer; at the same time showing that no changes take place from variation of position when the instrument is moved horizontally, and that thus throughout each stratum the electricity of the air is the same. It is the vertical elevation or depression which produces a marked difference. The results obtained by M. Pelletier, are—

1. That the electricity of the air increases directly with the distance from the surface of the earth—a fact of great importance, as it influences the determination of the question whether the electricity of the earth be derived from planetary space, as Pelletier affirms, or whether, as Professor Faraday thinks, it be the result of various processes taking place on the surface of the earth.

2. The measure of divergence of the electrometer being the measure of force, it was found from a series of daily observations extending over a period of five years (1844-8), that the quantity of electricity at the same place undergoes a regular increase and decrease in certain months of the year; that contrary to general belief, the quantity of electricity is at its maximum in winter, and undergoes a decrease until it finds its minimum in June, and then again rises to its maximum in the succeeding January.

The subjoined table represents the numerical results; and from this it will be seen, that at the same level, the quantity of electricity in the atmosphere is twelve times as great in the cold month of January as in the hot month of June.

Average of Five Years, 1844-8.

Months.	Quantity of electricity.
January (max.)	605
February	378
March	200
April	141
May	84
June (minimum)	47
July	49
August	62
September	70
October	131
November	209
December	507

3. *The influence of the state of the sky.*—From the results under this head it is made evident that the highest degree of electricity is not found in cloudy weather, but in the clear serene sky, *i. e.* at a time when the atmosphere is free from clouds. Thus for the whole year the proportional quantity may be represented; cloudy 186, clear 273. In reference to the monthly variations, as influenced by the state of the sky, it was found that in January, the maximum month of the year, the proportionate quantities are, cloudy 268, clear 1133. Only one exception, for an equal number of cloudy and clear days, was met with to this rule, *viz.*, in July: the electricity on the cloudy days was 41, on the clear days 35.

4. As regards fog, snow, and rain, it was observed that the amount of electricity was the same during the two former states of weather, and was double that observed during rainy weather. The latter corresponding to the minimum of the annual electricity, the former to the maximum of the year.

5. *As to the kind of electricity in the air.*—It was noted that during a period of five years, only twenty-five observations gave evidence of resinous or *negative* electricity; the rest, consisting of 1800 observations, indicated vitreous or *positive* electricity. The negative observations were all recorded after storm or rain, or some other great meteorological change. The normally electrical state of the atmosphere may therefore be considered as *positive*.

6. *Wind.*—It was observed that when the wind was E.S.E., or S.E., two maxima were regularly formed, and two minima when at W.S.W., or S.W.; and that these corresponded with the other variations which have been mentioned.

7. The diurnal variations were recorded during the same period of five years, from six o'clock in the morning until nine at night. The degrees of divergence showed that there were two maxima and two minima daily. The maxima were at 8 A.M. and from 8 to 9 P.M., corresponding to the maxima of barometrical elevation, but in opposite periods to the magnetical maxima. One minimum was from 2 to 4 P.M., the other probably during the early morning hours.

All these great and regular phenomena of the atmospheric electricity, Dr. Faraday observed, are phenomena of *static electricity*, while the thunder-storm, the St. Elmo light, &c. &c., are the exceptional instances of *current or dynamic electricity*; not necessarily, however, requiring clouds for its concentration or evolution.

The Professor concluded by expressing his dissent from the theory of M. Quetelet, that the electricity of the earth was nega-

tive, and that of planetary space positive. According to this theory the only true electricity is the negative, *i. e.* that produced by the friction of resinous substances, while the positive electricity is merely the absence or negation of electricity. It thus reverses all our common notions of electrical science. Dr. Faraday observed that while admitting to the very fullest extent the value of the observation and investigations of MM. Pelletier and Quetelet, which he had brought before his audience, he nevertheless could not receive the hypothesis they had framed thereon. x

. These researches on the electricity of the air are not only interesting in a meteorological, but in a physiological and pathological point of view. While they account for storms in cloudless skies, and for the occurrence of severe storms during winter, or in very cold latitudes, as at Cape Horn for instance (the Cape of Storms), they tend to throw light upon the exacerbations of disease at different hours of the day, as well as on the increase and decrease of epidemic and other diseases in different months of the year. Such remarkable changes in the electricity of the atmosphere cannot go on without affecting the static electricity of the human frame. According to the researches of Casper, the greater number of deaths from disease take place at the early hours in the morning, when the quantity of electricity in the air is reaching its minimum. Is this merely a coincidence, or is there some yet undiscovered connection between the cessation of life and the electrical state of the medium in which the human body is placed?

THE TREATMENT OF DEAFNESS.

The Academy of Medicine at Paris have appointed a commission, consisting of MM. Laugier, Bégin, Baillarger, Guéneau de Mussy et Piorry, to inquire into and report upon the merits of Mr. Yearsley's new mode of treating deafness by the hydrated cotton, on which subject that gentleman had addressed a memoir to the Academy.

OBITUARY.

On the 1st inst., at 32, Sydney Street, Brompton, in his 27th year, Duncan Ferguson, Esq., late House Physician to King's College Hospital.

Hospital and Infirmary Reports.

FELLOWS' PRIZE REPORTS
OF
CASES OCCURRING IN UNIVERSITY
COLLEGE HOSPITAL,
SUMMER SESSION 1845.

By C. H. F. ROUTH, M.D. Lond.

JAMES CHAMPION, æt. 21, admitted Thursday, June 12, 1845, under Dr. Thomson.

CASE.—*Herpes Zoster, accompanied with defective secretion of the kidneys.*

Of moderate stature, spare conformation, scrofulous diathesis, complexion fair, light hair, and blue eyes. By occupation a cabinet-maker, for the last four years without interruption. Single. His food consists chiefly of potatoes and bacon. It has been exclusively so for the last six weeks; indeed, he very seldom partakes of any other kinds of food. He drinks for the most part tea and coffee, and occasionally, but seldom, Ose. porter in the day. Never takes spirits. Generally works twelve hours a day, exclusive of the time employed at his meals. Has lately been much worked. Generally sleeps nine hours out of the twenty-four. Sometimes his work detains him as late as twelve o'clock at night, but then he does not begin till late in the day. Always warmly clad; disposition cheerful.

Resides at No. 12, Alfred Mews: a damp situation, but the workshop is dry. In London for the last six years.

Hereditary predisposition.—His father died of ague fever, at 30. Otherwise he had always been a healthy man. His mother died of phthisis, at 39. He has several brothers and sisters; all healthy except one brother, who is said to be consumptive. The latter was an in-patient in the hospital some time back with pneumonia. None of his family are liable to skin diseases.

Habitual state of health.—He himself has generally been thin, but healthy and strong. He has been liable to diarrhoea, but lately rather costive than otherwise. Has had small-pox and scarlet fever when a child. Never had hæmoptysis. Was in excellent health up to the date of the present attack. Never had syphilis or gonorrhoea. Had hooping-cough very severely when a child.

Present attack.—Last Saturday (the 7th) he was seized with sore-throat and slight pyrexia, but there was no headache, rigors, or general pains. (This sore-throat lasted

altogether about four days.) That night he felt a deep-seated pain running down the inside of his leg, dull and very painful, so that he could hardly walk. It lasted about one day. On the Sunday evening he observed the parts before affected with the pains were covered over with small red papule, which smarted and burned him a good deal. In the course of two days these papule became small vesicles. They were at first quite separate and distinct, but afterwards became confluent. While this change was going on, the burning and stinging pain was more intense, but the moment it was completed it entirely subsided.

On Tuesday evening, the 10th, the pain, which had subsided for four or five hours, recurred in the left iliac region, extending to the buttock and upper lumbar vertebra. This pain was also deep-seated and dull in character, but very severe, occasionally shooting down along the front and outside of the leg. This pain continued for about one day, and then more papule became apparent. The pain now became more burning and stinging in character. These papule now covered a large extent, about four inches transversely, tapering at both extremities; closely packed together in the upper portion, but more distinct inferiorly. These became vesicles on the evening of the 11th. When the papule came out at first, each was surrounded by large red areole, some as large as a penny piece, especially when they occurred singly; but when they were more closely aggregated there was a general redness all over, without any portion of healthy skin intervening. Last night he could hardly sleep in consequence of pain towards the upper portion of the lumbar vertebra, which seemed to be extending beyond, about two or three inches. It was precisely of the same character as before. The other parts that had been attacked on the 10th were still sore, but very much less painful. His appetite had not been much impaired, and he has been able to keep on at his work. He walked to the hospital.

Present state.—Face looks flushed. Skin over surface generally dry.

There is at present an eruption reaching from the anterior one-third of the thigh to full one foot seven inches towards the two upper lumbar vertebra, which it passes by three inches. It tapers at both ends; but in a transverse direction extends full fourteen inches—i. e. reaching from a little above the root of the penis to near the cleft of the nates. These portions of diseased skin are extremely hot, almost burning to the hand, and intensely red. Looking at the eruption, at least four stages are evident.

1st. The simple *papula*, consisting of red elevated points, about the size of a large pin's head, redder, and brighter in colour than the surrounding skin, and not very soft to the feel. Their colour does not entirely disappear on pressure. These are situated chiefly at the upper portion, and over the left testicle and inner side of the left thigh. Over these parts there is deep-seated pain, with more or less superficial tingling and burning.

2d. The vesicle in its first state, consisting of an elevation of the cuticle containing fluid, transparent, with a central depression (not discoloured), about the size of half a pea, quite full, feeling hard and tense to the finger. These exist chiefly upon the buttock, and are the seat of a slight burning pain.

3d. The vesicle in its second stage, without a central depression; also rather tense and soft to the feel, and containing a semi-transparent fluid, varying in size from that of a fourpenny to a shilling piece. These exist chiefly on the outer side of the abdomen, and are unaffected with pain.

4th. Flabby vesicles, containing a slightly discoloured fluid, of a bluish black tinge. These exist in fewer numbers over the thigh and front parts of the abdomen. These, also, are free from pain.

When examined by Dr. Thomson the patient could hardly hold himself straight, being inclined to the left side, which attitude he stated gave him less pain. It is also relieved by pressure. There are no rigors or general soreness. He states he very seldom perspires, though severely worked. There is a general feeling of languor, and restlessness. Cannot sleep in consequence of the pain in the eruption. Expression of countenance natural. A few of the sebaceous follicles over the face are enlarged. Organs of senses healthy. No headache or giddiness. There is some pain across the loins, but only at the part where the eruption exists.

Thoracic and abdominal organs.—Respiration healthy; equally costal and diaphragmatic. Less resonance under right than left clavicle, but very trifling. In the lower part of the chest, however, along with increased resonance, there is a dry crackling sound heard.

Cardiac dullness reaches as high as the fourth rib; but it is so well covered with lung that its other limits cannot be accurately determined. Sounds healthy. Pulse 100; weak. Liver reaches as high as between sixth and seventh ribs, extending three inches below the margin of the ribs. Spleen does not extend below the ribs. Appetite very good. No thirst. Bowels constipated. No tenderness or enlargement of the kidneys felt from the front.

Urine is scanty; sp. gr. 1022; of a light amber colour, with clear mucous flocculi in it. No excess or deficiency of phosphates; no albumen: alkaline.

Supposed exciting cause.—He is not aware of any cause that could have induced the present attack.

Treatment.—℞ Colomel. gr. v.; Micae. Panis, gr. ij. quam primum sumend. ℞. Haust. Purg. niger hora post pil. sumend. ℞ Decoct. Cinchonæ Flavæ, ℥iss.; Acid. Hydro-Chlor. dil. ℥xij.; Tinct. Opii, ℥viiij. Ft. haust. 6ta. qq. hora sumend. Milk diet.

June 13th.—The eruption has not extended; but, on the left side of the scrotum, the vesicles in their first stage have been formed, as also in the portion near the lumbar vertebrae. Does not complain any more of the deep-seated dull pain in these parts, but there is a tingling burning sensation. The vesicles are, in most of the other parts, becoming more confluent and discoloured. Slept rather better last night. The parts, if anything, are more hot to-day. There is no headache or giddiness. Bowels not open. His appetite continues excellent. He has made about xij. of urine since yesterday; sp. gr. 1022, alkaline, of a light yellow colour, with the same kind of mucous flocculi in it. No excess or deficiency of phosphates; no albumen.

14th.—The eruption is not so vivid as yesterday, nor is it extending. There is no pain whatever. The vesicles are becoming everywhere more confluent, flabby, and discoloured. The new vesicles that were formed yesterday have to-day no central depression, and the contents are more opaque than they were. In two places the eruption has begun to scab. The scab is rough to the feel, about the size of a sixpence, of a dark brown colour, and flat. Skin over the trunk is generally moist and cool. He says he does not sweat. Slept very well last night. No headache. Heart sounds are weak. Pulse 112; a little sharp, but compressible. Tongue rather congested. Bowels not open. Has made 3xij. of urine in the last twenty-four hours; very acid; sp. gr. 1025. Other reactions as before. Ft. in usu Mist. addendo Acid. Hydro-Chlor. ℥v. s. d. R Pil. Hydragr. gr. iij.; Pulv. Ipecac. gr. i.; Ext. Colocynth, co. gr. i.; Ext. Hyosyam. aa. gr. iij. Fiat pil ij. h. n. s.

16th.—Is in no pain to-day. The vesicles are much more flabby; their contents more opaque; in some more livid. The surface generally of the skin is less red, and not so hot to the feel. Scarcely perspires at all at night, though the temperature has varied from 62 to 76, and the weather feels very oppressive. Pulse 60; very weak. Bowels not open. Urine 3xxx. in

the last twenty-four hours; sp. gr. 1025; very acid. Other reactions as before. β Sumat horis ii. domest. statim.

17th.—The eruption is not spreading, nor is there any pain whatever about it. The vesicles are all flabby and discoloured, but there are no more scabs forming. In bodily health he feels very well. Pulse 72; slightly resisting. Tongue a little furred. Appetite good. Has made xxxiv . of urine; sp. gr. 1014. Reactions as before. The bowels have been opened twice. Repet. Haust. Sennæ. β Alcoholis, 3vj .; Hydrarg. Bichloridi, gr. ij.; Liquor. distill. ziss . Fiat lotio opi spongii partibus affectis mane nocte que applicand.

20th.—Since last report the skin has begun to peel off, and to dry at other parts. Here and there, where the epidermis has been removed, the true skin beneath has become dry and dark, with small points of superficial ulceration. At the inner portion, between the scrotum and the thigh, the ulcerations are more extensive, and the skin more fissured, discharging laudable pus. The whole surface of the eruption is more or less affected with itching and tingling pain, and feels stiff. Tongue slightly furred. Appetite and spirits good. Bowels open four or five times. Urine scarcely acid; sp. gr. 1014. Reactions as before.

21st.—The tingling pain is much less to-day, and the scabs are beginning to look white. There are no more vesicles remaining, but here and there the points of ulceration seem to have increased in size and depth, and the surface of the granulations are red and elevated. These points of ulceration, however, are not larger anywhere than a small pea. The fissures near the scrotum are most painful. Bowels not open. Has made xliv . of urine; sp. gr. 1015; acid; of a pale yellow colour. Reactions as before. Pt. in usu medicamentorum; repet. haust. purgans mane; Utatur sol. argenti nitratis partibus ulceratis.

24th.—There are very few spots of ulceration remaining, and the scales are large and dark-coloured, but the eruption still feels dry and uncomfortable. No pain. Pulse 108; regular. Has made xlviij . of urine; sp. gr. 1012; acid; clear amber, with a mucous flocculent deposit. Under the microscope, there was seen at first an immense number of small organic globules, which, after keeping a day, exhibited motions analogous to the rotiferous animalcule; with some triple phosphates. Utatur lotio calida partibus affectis.

26th.—The eruption generally is looking better. All the scabs have fallen off. In some of the places where, however, ulceration had taken place, the ulcers are becoming deeper, discharging healthy pus. Bowels have not been opened to-day. The

skin is rather dry, but not hot. The tongue is still furred posteriorly, but morbidly red at the apex. The lungs are very resonant inferiorly, and the dry crackling of the emphysema is still heard. Cardiac dulness does not seem to extend higher than the fourth rib, but the limits of the several organs cannot be very accurately determined, by reason of the emphysema. The liver reaches full one inch below the margin of the ribs. Respiration is chiefly confined to the lower ribs. Has made 52 oz. of urine, sp. gr. 1018, very acid; some excess of phosphates, and perhaps a trace of albumen.— β Haust. purgans niger, quem primam sumat. Applicetur Argenti Nitratis Solutio opi penicilli partibus ulceratis, et postea utatur lotio aquæ calidæ.

28th.—There is some tenderness over the buttock to-day, and there are two spots of about an inch and a half by half an inch of superficial ulceration discharging pus. Everywhere else, however, the ulcerated points are rapidly healing. Appetite excellent; skin cool and moist, but he does not perspire at night. Has made 72 oz. of urine, sp. gr. 1012, and rather hazy; no albumen; bowels well open.—Full diet; Pergat. Repet Haust. purgans.

30th.—The skin is perfectly healed everywhere, and entirely free from pain. Expression of countenance natural. Sweated a little last night. Sleeps very well. Pulse 80, regular. Tongue quite clean; no headache or giddiness. The liver still extends one inch below the margin of the ribs. 32 oz. of urine saved since last night, sp. gr. 1015, perfectly natural.

Discharged cured.

REMARKS.—The whole interest of this case centres in the connection between the eruption and the defective secretion of the kidneys and skin, and the rapid recovery when the former resumed its healthy action.

Diagnosis.—The eruption was manifestly vesicular. 1st. It could not be scabies; the position negated this opinion. 2d. Nor eczema; for the vesicles were too large. 3d. Nor miliaria; the absence of any general fever, its duration, limited position, the large size and confluent character of the vesicles, were all circumstances opposed to this view. 4th. It could not be pemphigus; for the bullæ here are distinct, not surrounded by any red areolæ, four in number, often solitary, and in size larger and more rounded. 5th. The only other affection for which it might be mistaken was that variety of erysipelas in which vesicles occasionally occur over the inflamed parts: but these vesicles have a peculiar broad flat character; the skin is much swelled, and the redness is

diffused even at considerable distance; moreover, this redness spreads more or less in the course of the disease, and there is high fever, frequently delirium. All these symptoms were absent in the present case. The disease could, therefore, only be herpes. The eruption is always preceded by a deep-seated pain, which is instantly relieved on the appearance of the vesicles. There is no violent fever, though the circulation may be so excited as to give rise to slight pyrexia; moreover, the vesicles occurred in groups of fourteen or fifteen, or more, becoming afterwards confluent and discoloured, and the redness of the inflammatory base was intense,—all symptoms invariably present in herpes.

With regard to the *variety*. Much is stated in books about the varieties of herpes. It is the opinion, however, of Dr. Thomson that the difference is rather one in words than in nature. He admits but two varieties—the Herpes iris and the Herpes phlyctenodes; to the latter of which he refers the minor varieties of *H. labialis*, *preputialis*, &c. The present case, from the absence of radiating rings of various colours, was an example of Herpes phlyctenodes.

In the early stage, before the appearance of the eruption, there is often some difficulty in making out the diagnosis. When it occurs in the thorax, it has not unfrequently been mistaken for pneumonia and pleuritis, from the deep-seated pain which precedes it, and the slight amount of pyrexia present. The pain, it would seem, is connected with a peculiar state of the nervous system, perhaps congestion, and the eruption is the means adopted by the *vis medicatrix naturæ* to remove it, precisely as in the case of a suppurating gland. Hence it is that, if the eruption is too speedily thrown in, severe neuralgia of the part may result.*

There was slight emphysema, indicated by the increased resonance on percussion, and dry crackling respiration.

Causes: predisposing.—Living in damp situations is assigned by Thomas as a cause of herpes. This patient lived in a very damp locality.

2d. The nature of his food.—For six weeks preceding this attack he had lived chiefly on bacon and potatoes. We would call attention to the former of these substances. Bacon, as an article of diet, acts more frequently perhaps than any other commonly employed as an irritant poison: it may excite vomiting and diarrhoea, if of

inferior quality, and even produce death. One such fatal case is mentioned by Dr. A. Taylor as having occurred in this metropolis in December, 1896. This effect, however, is only produced in peculiar idiosyncrasies. Other ingesta also, such as pork generally, mussels and other kind of shell-fish, have produced similar effects. The long-continued use of mineral poisons also gives rise sometimes to certain eruptions; the varieties of eczema mercuriale and arsenicale produced by mercury and arsenic. In the case of a patient under Dr. Thomson affected with eczema rubrum, the disease appeared to have been produced by the continued use, as an article of diet, of beef-stew. The effect seems to be in all these cases due to an irritable state of the mucous membrane. Thus herpes preputialis is stated by Dr. Thomson to be invariably an indication of acid gastric dyspepsia, the acidity producing necessarily irritation of the gastric mucous membrane. Thus it is highly probable that in this case the bacon, acting as an irritant to the mucous membrane, gave rise to the herpes.

But, 3d, we have abundant proof that the excretions were defective, morbid matters being thereby necessarily retained in the blood.

1. The function of the skin was imperfect. At a remarkably hot and oppressive season of the year, with a temperature frequently as high as 74° to 80°, and not below 63°, he stated that, however hard he worked, he never perspired. Fourcault, in his *Comptes Rendus* (No. 19, 1844), remarks, that his experiments on this subject led him to conclude that the suppression of perspiration determined five orders of phenomena: 1st, a great change in blood; 2d, a great fall in the temperature of the skin; 3d, super-secretions and effusions of different kinds; 4th, local lesions and vascular engorgements; 5th, alteration in the quality of the urine,—among the number, albuminuria. The second of these effects was not noticed in this patient, though his skin was moderately cool. There was congestion and engorgement of the liver, and the local cutaneous lesion. A trace of albumen was once found. The absence generally of the latter symptom may perhaps be explained by the fact that, although the action of the skin was defective, it was not completely suppressed.

But 2d. We usually find that when the function of the skin is defective, that of the kidneys makes up for it. It is more active, and in this manner the blood is epurated, at least in part; but here it was not so.

The following table will give the characters of the urine during his stay in the hospital:—

* In the case of a lady lately mentioned to me, herpes broke out on the shoulder. It was thrown in some way. Most severe tic in the part has continued ever since, which has resisted all treatment for the last fifteen months.

Date.	Reaction.	Colour, &c., Albumen.	Sp. gr.	Quantity passed in 24 hours.	Diet.	Microscopical characters.	Quantity of solid matter excreted in 24 hours.
June 12	alkaline.	Clear; no albumen.	1022	3	Milk.		—
" 13	Do.	Do.	1022	12	"		246 gr.
" 14	Very acid.	Do.	1025	12	"		340
" 16	Do.	Do.	1025	30	"		873
" 17	Acid.	Do.	1014	34	"		587
" 19	Do.	Do.	1016	About 12	—		—
" 20	Scarcely acid.	Do.	1014	—	—		—
" 21	Acid.	Do.	1015	45	—		774
" 23	Do.	Do.	1012	32	—		427
" 24	Acid.	Hazy; no albumen.	1012	68	Milk.	Small organic globules, after a time assuming a spontaneous motion.	924
" 25	Do.	Do.	1010	76	—		851
" 26	Very acid.	Trace of albumen.	1013	52	—		764
" 27	Do.	No albumen.	1018	36	—		612
" 28	Do.	Do.	1012	72	Full diet.		979
" 30	Do.	Do.	1018	54	—		1090
July 1	Do.	Do.	1015	32 in 12 hours.	—		—

The normal quantity to be excreted daily amounting to from 640 to 812.

The first interesting fact elicited by the examination of the above table is the small quantity of urine excreted at first, and the diuresis which followed, and bore pace with the improvement of the disease.

2. It was first *alkaline*. Now in this case the alkalinity could not be referred to disease of the brain: this patient was remarkably free from any head complication. Nor disease of the spinal chord. The deep-seated pain before felt at the loins was clearly due to the Herpes, nor were there any symptoms referable to either the kidney or bladder. The former felt firm in front, more free from tenderness, and there was no tenderness at the hypogastrium. There was no pus in the urine; and a trace of albumen was found once only, and the alkalinity did not persist. Was it owing to high temperature? In reference to our notes upwards of 19 specimens were examined from the same ward, and under the same circumstances, of keeping, exposure, &c. on the same days, and the specimens of Champion's alone were alkaline. Thus, supposing the temperature to have induced this alkalinity, the urine must have presented some abnormal condition to be so speedily decomposed. On the 24th the condition of the patient's urine presented some points of interest. Small organic

globules were detected in it under the microscope. Dr. Golding Bird describes this appearance as very rare, having met these only in three cases, and in two, in the urine of menstruating women. We have found them in two cases, both extremely nervous and hysterical females. The interesting point is, however, that after keeping a day, these globules exhibited motions not unlike those of rotiferous animalcules.

Exciting cause.—Either of the two causes above noted, the defective action of the kidneys and skin, may be looked upon as exciting causes; but in the present case it appears more rational to ascribe it to the slight ephemeral fever occurring on the 7th June. He was then complaining of sore-throat, with slight pyrexia. Now the blood was already vitiated, and the secretions were defective. Any additional cause which would therefore suddenly arrest the excretions thus incompletely performed, would determine the occurrence of the disease.

Treatment was founded upon the above diagnosis.—1. The intestinal tract was first cleansed, the active purgative having, moreover, the effect of assisting the epuration of the blood; and 2. Tonics, more especially directed to aid digestion, to give tone to the weakened mucous membrane, and to correct the alkalinity of the urine, were given. These medicines, coupled with

some local applications, and some blue pill to relieve the congested liver, embodied the whole treatment; his diet being simply nutritious. Under this regimen he rapidly recovered.

Prognosis.—There seems to be no reason to apprehend a recurrence of the disease if due care be taken in the selection of the *quality of food*. The emphysema under which he laboured was only partial, and the secreting organs had completely resumed a healthy action on his dismissal from the hospital.

Correspondence.

PURE ALMOND OIL A BENEFICIAL SUBSTITUTE FOR COD-LIVER OIL.

SIR,—Will you have the kindness to insert the following remarks upon the applicability of the common sweet almond oil (*Ol. Amygdal. Dulc.*) to all cases in which Cod-liver oil is prescribed.

In a flat and damp agricultural district, where, amongst a certain class, intermarriage is very frequent,—where intermit-tents, struma, and all kinds of disease, characterised by the presence of an adventitious product in the system, are very common, and where, on account of scarcity of food and clothing, diseases are generally of an adynamic type,—it is not to be wondered at that medicines which enhance the nutritive powers should be very largely prescribed.

We have always subscribed to that opinion which denies the specific agency of the oleum jecoris in tuberculous and like diseases, and attributes the benefits conferred, to its influence on the assimilative processes. We have prescribed the cod-liver oil with great success both in hospital and general practice, and consider that its only drawbacks are its nauseous flavour and high price.*

In June last we agreed to prescribe a vegetable oil instead of the oleum jecoris, and our experience is highly favourable to the therapeutical virtues of the oleum amygdale: we have every reason to declare that the almond oil and the cod-liver oil act precisely in the same manner, and that the first-mentioned oil has anything but a disagreeable taste, and can be obtained for at least one-third of the price of the best cod-liver oil.

Our experience of the beneficial effects of

* The nauseous flavour is no longer an objection. On the contrary, the pure oil prepared by Messrs. Langton, Brothers, of Thames Street, has rather a pleasant flavour, something like that of lobster.—*Ed. Gaz.*

almond oil has been derived from upwards of 250 well-observed cases. In no one case has it purged, and the contrary effect is very frequently produced. We are in the habit of prescribing the oil without any adjunct; at first in ʒj. doses half an hour after every meal: the dose is gradually increased.

A drop of Eau de Cologne, or of some essential oil, renders the neat oil anything but disagreeable to the taste. It is an excellent vehicle for the exhibition of iodine in small doses, the latter being triturated with a small quantity of olive oil, and then added to a larger amount of oleum amygdale.

The following—*R. Ol. Amygdale, ʒss. ; Ol. Olive, ʒij. ; Iodinii, gr. ʒ. M. Cap. ʒ ter die*—has been of great use in several syphilitic diseases of the bones and skin, in broken-down constitutions, in chronic pleurisy, and in many cases of chronic enlargement of the glands of the neck.

The influence of ʒss. of this oil of almonds taken daily, upon the weight of some patients progressing in health under its exhibition, is very remarkable: in one case there was a weekly increase of 2 lbs., and in another of 4 lbs.

Care must be taken to attend to the biliary secretion during the exhibition of the oil, which is contra-indicated when there are evidences of symptoms of local congestion or of inflammation.

P. MARTIN DUNCAN, M.B. Lond.
Physician to the Essex and Colchester Hospital.

ROGER S. NUNN,
Surgeon to the Essex and Colchester Hospital.
Colchester, Jan. 25, 1850.

FERMENTED AND UNFERMENTED BREAD.—ARSENICAL MURIATIC ACID.

SIR,—In your GAZETTE of the 11th inst. you have cautioned your readers against the danger of eating unfermented bread, in which muriatic acid is used, as it appears that arsenic is sometimes found in the common muriatic acid; and you further observe, that this bread "possesses no nutritive advantages over bread made by common fermentation;" from which observation some of your readers might infer that it possesses no advantage at all over common bread. To prevent any such misapprehension, and to meet the objection of risk, I would refer them to a small pamphlet on the subject, published by Messrs. Taylor, Walton, and Maberly, No. 28, Upper Gower Street, London, wherein are shown the superior wholesomeness and economy of this unfermented bread. It is therein also stated that "the acid recommended in the formula is the muriatic of commerce, as prepared for the London

market," for "when the sulphur used in the preliminary process is obtained from iron pyrites, as it is in several of the manufactories in the northern counties, the acid is impure," &c.;—so that the public may safely depend upon the purity of the acid made by Messrs. Tennant, Sons, and Co., No. 101, Thames Street; Messrs. White, of Castle Street, Saffron Hill; or, in short, of any of the great London chemists. For several years past I have been supplied by Mr. Bainbridge, of Leather Lane, Holborn, who retails the acid at a moderate price; and I can bear testimony, with several of my friends, to the purity of the acid, and to the salutary effects of the bread in chronic cases of dyspepsia.—I am, sir,

Your obedient servant,
GEO. STOTHERT.

Richmond Hill, Bath.
Jan. 20, 1850.

* * We can assure Mr. Stothert that we have found arsenic in several specimens of muriatic acid retailed by chemists in London; and the caution given by the publication of Dr. Henry's letter (page 85) is therefore not uncalled for. As to relative nutritive properties, we still entertain our "misapprehension" that the unfermented possesses no advantages over well-made fermented bread. Its manufacture may be more economical, but the bread is neither more nutritious nor more wholesome. In the fermented article, the carbonic acid is produced at the expense of the flour while the common salt is mixed with the dough. In the unfermented variety, the carbonic acid is produced from the reaction of the acid on the alkaline carbonate mechanically mixed with the flour, and common salt is therefore a result of the mixture. In what way is the compound rendered more nutritious? Unfermented bread is nothing more than baked flour distended by carbonic acid as a result of effervescence. If the acid or alkali should be in excess, it would be decidedly unwholesome.

THE LENGTH OF THE UMBILICAL CORD.

SIR,—Observing in your GAZETTE of Saturday last, some notices of cases where the funis umbilicus was very long, I was induced to refer to my notes of midwifery cases, and found one where the funis measured five feet one inch: a Mrs. C., her second child, born on January 8, 1839. I have attended her seven times, but on no other occasion has the funis been remarkably long: it was coiled twice round the child's abdomen.

In one of her labours the funis was so short, that I was compelled to divide it as

soon as the head was born, to prevent the child from being strangled, the funis being round the neck: the child lived.

I am, sir,
Your obedient servant,
JOHN F. WOOD.

Oxford, Jan. 29, 1850.

TRANSPOSITION OF THE VISCERA.

SIR,—I shall feel much obliged by your permitting me, through the medium of your journal, to correct an omission in my paper on Transposition of the Viscera, published in the MEDICAL GAZETTE of the 25th January last.

In alluding to Mr. McWhinnie's cases I omitted to mention in one a remarkable irregularity of the vena cava inferior, and which gave great additional interest to that gentleman's communication. I was also in error regarding the sex.

The details of the case will be found in the MEDICAL GAZETTE of 1840, page 31.

I remain, sir,
Your very obedient servant,
WILLIAM CLAPP.

Exeter, Feb. 7, 1850.

Selections from Journals.

THE THERAPEUTIC USE OF ELECTRICITY— POSSIBILITY OF RESTRICTING ITS ACTION TO ONE ORGAN. BY M. DUCHENNE.

M. DUCHENNE gives the results of his investigations in the following propositions:—

1. *The electrical machine* produces cutaneous phenomena, probably useful in certain slight affections, but of no avail in paralysis of motion, or those cases in which it is required to act strongly on the cutaneous sensibility, as in cholera, sciatica, anæsthetics, &c. The Leyden jar excites muscular contractions, but its action is painful and dangerous. It is impossible to limit the electric action to one organ by either of these means. The electric bath elicits no appreciable physiological or therapeutic effects.

2. *Electro-puncture.*—The electric action cannot be isolated by this method. Its operation in this form is complex; being composed of an excitation of the cutaneous sensibility, producing a sense of burning, and an excitation of the muscular sensibility, causing a peculiar sensation of muscular contraction. The excitation being limited to the point traversed by the needle, is almost powerless, more especially where it is required to act on a large surface. The muscular contractions excited

are generally irregular and uncertain. To obtain electric excitement throughout a muscle more needles must be introduced than any patient will endure. The method which consists in puncturing the nervous trunks is almost always impracticable. Combined with local galvanism, electropuncture may be of great service in medicine and surgery.

3. *Galvanism directed in the course of the nerves, or from the extremities towards the nervous centres.*—A current prolonged a sufficient length of time, and with only brief interruptions, weakens neither the muscular contractions, sensation, nor voluntary motion, and does not produce reflex phenomena above the point excited. A prolonged current in a nerve, the vitality of which is feeble, diminishes, notably, and for a long time, the excitability of the nerve without affecting the voluntary motion. A change in the direction of the current does not produce any appreciable modification of this effect. Currents passed from the nervous extremities towards the centres act more especially on the sensibility. The reflex muscular contractions in this case are irregular and indistinct compared to the effects as regards sensation. Galvanic currents directed in the course of the nerve, or from its terminations towards the centre, exercise but slight influence on paralysis of sensation or motion.

M. Duchenne has constructed an apparatus for the therapeutic application of galvanism, which he terms "a double current electrical apparatus."—*Comptes Rendus*, 1849. X

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Feb. 2.

BIRTHS.		DEATHS.	
Males....	770	Males....	528
Females..	718	Females..	566
	1488		1094

CAUSES OF DEATH.

ALL CAUSES	1094
SPECIFIED CAUSES	1082
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	168
<i>Sporadic Diseases, viz.—</i>	
2. Dropsy, Cancer, &c.	46
3. Brain, Spinal Marrow, Nerves, and Senses	138
4. Heart and Bloodvessels.	45
5. Lungs and organs of Respiration	247
6. Stomach, Liver, &c.	64
7. Diseases of the Kidneys, &c.	20
8. Childbirth, Diseases of Uterus, &c.	9
9. Rheumatism, Diseases of Bones, Joints, &c.	9
10. Skin.....	2
11. Old Age	68
12. Sudden Deaths.....	18
13. Violence, Privation, Cold, &c....	25

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	5	Convulsions.....	30
Measles.....	22	Bronchitis.....	125
Scarlatina.....	13	Pneumonia.....	75
Whooping-cough.....	23	Phthisis.....	137
Diarrhoea.....	21	Lungs.....	6
Cholera.....	2	Teething.....	16
Typhus.....	35	Stomach.....	6
Dropsy.....	28	Liver.....	8
Hydrocephalus.....	33	Childbirth.....	7
Apoplexy.....	31	Uterus.....	0
Paralysis.....	34		

REMARKS.—The total number of deaths was 63 above the average of the fifth week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer	29.94
Thermometer.....	41.8
Self-registering do.	Max. 0.0 Min. 22.°
* From 12 observations daily. ° Sun.	

RAIN, in inches, .56.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 3.8 above the mean of the month.

BOOKS & PERIODICALS RECEIVED

FOR REVIEW.

(The List will be given in our next No.)

NOTICES TO CORRESPONDENTS.

Mr. R. R. Robinson's interesting case of Acute Bronchitis will be inserted, if possible, in the following number.

Mr. W. Smith, Belper.—We regret that we are obliged from want of space to postpone the continuation paper until next week.—The Sydenham Society's works are not printed for sale, but return-copies may be sometimes obtained by application at the Society's Office, Frith Street, Soho.

Mr. Trayer's communication will appear in the next number. A proof will be sent.

We have to request our contributors that in order to save time they will be so good as to address their corrected proofs to the printers, Messrs. Wilson and Ogilvy, 57, Skinner Street. We have to acknowledge the receipt of an American pamphlet on Service-pipes for Water, by Professor Horsford.

We are obliged to Dr. G. Robinson for the first Report of the Newcastle and Gateshead Pathological Society. It will give us great pleasure to make arrangements for their regular publication.

Dr. F. Robinson's case of Scrofulous Ulceration shall be inserted with as little delay as our arrangements will permit.

We have to acknowledge the receipt of another paper from Dr. Routh.

A Subscriber, Boston, Lincolnshire.—The pamphlet respecting the Parisian hospitals to which we referred in a former notice, is entitled "Réglement sur la Service de Santé des Hôpitaux et Hospices Civils de Paris. Paris: Bailly, 1839. Bailière procured the copy which we have now before us.

The correspondence forwarded by Mr. Syme shall be inserted next week. It reached us too late for the present number.

We are obliged to Dr. Gavin for the ticket which he has forwarded to us.

Received.—A Second Report of the Liverpool Pathological Society.

Lectures.

COURSE OF LECTURES

ON

DISEASES OF THE HEART.

Delivered at St. Vincent's Hospital during the Session 1849-50.

By O'BRYEN BELLINGHAM, M.D.

Fellow of, and Professor in, the School of the Royal College of Surgeons in Ireland, and one of the Medical Officers of the Hospital.

LECTURE IV.

Dimensions of the healthy heart, continued—Thickness of the parietes—Left ventricle—Right ventricle—Septum ventriculorum—Auricular walls—Conclusions respecting the thickness of the parietes of the heart—Capacity of the several cavities of the heart—Conclusions respecting—Diameter of the orifices of the heart—Right auriculo-ventricular orifice—Left auriculo-ventricular orifice—Aortic and pulmonary orifices—Conclusions respecting the diameter of the orifices of the heart—Relative position of the several parts of the heart to the parietes of the chest—Relative position of the orifices of the heart to the parietes of the chest—Relative position of the orifices of the heart to one another—Relative position of the large vessels to the parietes of the chest.

DIMENSIONS OF THE HEALTHY HEART.

Thickness of the parietes.—The parietes of the several cavities of the heart have not the same thickness; as a general rule, the walls of the left chambers are thicker than those of the right, and the parietes of the ventricles much exceed those of the auricles; the left ventricle has much thicker walls than the right, and the walls of the left auricles are a little thicker than those of the right.

Left ventricle.—According to M. Bouillaud* the average thickness of the walls of the left ventricle, near its base, in ten subjects, was six lines and a half; we may consider (he adds) seven lines as the average thickness of the parietes of this ventricle. According to Dr. Ranking† the mean thickness of the walls of the left ventricle in the male, at a point about an inch distant from the origin of the aorta, is $\frac{27}{100}$ ths of an inch; in the female $\frac{23}{100}$ ths of an inch. M. Bisot's researches‡ prove that the parietes of the left ventricle, in

both sexes, go on increasing in thickness from youth to advanced age; and that the thickest part of its walls is at the middle, next at the base, and that the thinnest part is at the apex.

The accompanying table, given by him, shows the mean thickness (in lines) of the parietes of the left ventricle at these three points, in the male and female, at different ages.

Left ventricle.

FEMALE.	Apex.	3 5-28
	Middle.	4 7-13
	Base.	4 2-7
	Age.	16 to 20 30 to 40 50 to 80 Mean average between 16 and 80
MALE.	Apex.	3 4-9
	Middle.	3 7-9
	Base.	4 2-9
	Age.	16 to 20 30 to 40 50 to 70 Mean average between 16 and 70

Right ventricle.—According to M. Bouillaud, the average thickness of the walls of the right ventricle in ten subjects was two lines three fifths: we may therefore, he says, consider two lines and a half as the average thickness of the parietes of the right ventricle. According to Dr. Ranking, the mean thickness of the walls of the right ventricle in the male, at a point about an inch distant from the origin of the pulmonary artery, is $\frac{8}{100}$ ths of an inch; in the female $\frac{6}{100}$ ths of an inch. According to M. Bisot, the thickest part of the parietes of the right ventricle is not at the same point as on the left side, but is close to the base of the heart; and the parietes of this ventricle remain nearly stationary at the different periods of life, being, however, a

* *Traité des Maladies du Cœur*, 2nde édition.

† MEDICAL GAZETTE.

‡ *Mém. de la Soc. Méd. d'Observation*, tome i.

little thicker in advanced life than at an earlier period.

The following table, given by M. Bizot, shows the mean thickness (in lines) of the

parietes of the right ventricle at three distinct points, in the male and female at different ages.

Right ventricle.

MALE.				FEMALE.			
Age.	Base.	Middle.	Apex.	Age.	Base.	Middle.	Apex.
16 to 29	1 27-38	1 8-19	1 1-19	16 to 29	1 4-7	1 2-7	25-28
30 to 49	1 39-46	1 7-23	45-46	30 to 49	1 19-22	1 13-54	25-27
50 to 79	2 1-19	1 53-168	81-84	50 to 79	1 1-4	1 1-4	1
Mean average between 16 and 79	1 113-122	1 99-244	1 2-61	Mean average between 15 and 59	1 2-3	1 7-24	673-720

Septum ventriculorum.—According to Dr. Ranking, the mean thickness of the septum of the ventricles, taken at its centre, in fifteen males between 26 and 65 years of age, was 22-48ths of an inch. In seventeen females, between the age of 18 and 62, 14-48ths of an inch. M. Bizot's researches show that the thickness of the septum of the ventricles goes on increasing from infancy to an advanced period of life; and that it is thicker in the male than in the female. The following table, given by him, shows the average thickness, in lines, of this part at its centre, in the male and female at different ages.

Age.	Male.	Female.
16 to 29	4 17-18	4 11-14
30 to 49	4 21-23	4 11-27
50 to 79	5 1-3	5 3-19

Auricular walls.—The walls of the left auricle exceed those of the right in thickness; but statistics are wanting under this head. M. Bouillaud is almost the only writer who has given measurements. According to him, the average thickness of the parietes of the left auricle in four subjects was one line and a half; of the right auricle one line.

Conclusions respecting the thickness of the parietes of the heart.—From the preceding details it appears that—1. The parietes of the left ventricle are thicker in the male than in the female heart at every age.

2. The parietes of the left ventricle and of the septum ventriculorum increase in thickness as age advances in both sexes.

3. The parietes of the right ventricle increase also in thickness as age advances in both sexes, but in a much less ratio.

4. The thickest part of the parietes of the left ventricle is at the centre, next at the base, and it is thinnest at the apex.

5. The thickest part of the parietes of the right ventricle is at the base.

6. The thickest part of the septum ventriculorum is at its centre.

7. The mean thickness of the parietes of the left ventricle, or of the septum, in the healthy heart of the male in advanced life, when the walls of the heart attain their maximum development (viz. between 50 and 79 years of age), and at the thickest part, is under six lines.

8. The mean thickness of the parietes of the left ventricle in the female, between 50 and 89 years of age, is five lines.

9. The mean thickness of the parietes of the right ventricle in the healthy heart of the male, between 50 and 79 years of age, and at its thickest part, is a fraction above two lines; in the female, one line and a quarter.

10. The mean thickness of the parietes of the left ventricle is, therefore, in both sexes, nearly three times as great as that of the right ventricle, as was long since laid down by Riolausus.

Capacity of the cavities.—The capacity of the several cavities of the healthy heart is not the same: the auricles exceed the ventricles in this respect; the right auricle likewise exceeds the left, and the capacity of the right ventricle is greater than that of the left. The capacity of both ventricles increases gradually as life advances in both sexes: the increase is more rapid in youth; after fifty years of age it is less marked, although it still goes on; so that, both in infancy and old age, the ratio between the capacity of both ventricles is the same.

That the capacity of the right ventricle is greater than that of the left was suspected long before it was actually proved.

Senac says repeated examinations have convinced him that the capacity of the right ventricle exceeds that of the left; but that the difference is almost insensible in some subjects. M. Bouillaud repeats nearly Senac's words: he says—"the medium capacity of the right ventricle exceeds that of the left; but the difference is really very slight." This position has, however, been denied by some writers, and the apparently increased capacity of the right ventricle has been supposed to depend upon the accumulation of blood in the right cavities of the heart after death. "There is much reason to believe (Dr. A. Thomson observes*) that the greater capacity of the right auricle and ventricle depends in part upon the accumulation of blood which generally takes place in most kinds of slow death in the pulmonary arteries; and in part also upon the greater thinness, and consequent distensibility, of the right ventricle. In men dying suddenly, and in animals killed purposely, in which the pulmonary artery is opened so as to allow of the free egress of the blood from the right side of the heart, the capacity of this ventricle is not greater than that of the left, and the proportions of the capacity of the two sides of the heart usually found after slow death are sometimes reversed when a ligature is placed on the aorta, and the pulmonary artery is opened." But, as was long since remarked by Senac, "since in the fœtus the capacity of the right ventricle exceeds that of the left, it would be strange if in the adult they should have the same capacity." While M. Bizot's researches have proved that the right ventricle exceeds the left in capacity at every age; that this is the normal condition of the parts; and that it

is not at all owing to the accumulation of blood during the last moments of life.

The actual capacity of each of the ventricles has been endeavoured to be determined by filling their cavities with fluid or with injection; but, as the parietes of the right ventricle are much more yielding than those of the left, this method is calculated to lead into error; indeed, Senac says he has introduced a pound and a half of injection into the cavities of the heart without using much force. According to him, each ventricle holds about two ounces of fluid; but the excess over this is very variable, the right sometimes holding from one to four drachms more. Hales estimated the capacity of the left ventricle at one fluid ounce and a half, and that of the right at two fluid-ounces. Each ventricle, on an average, it is generally considered, will contain a hen's egg, and, when moderately distended, is capable of holding from an ounce and a half to two fluid-ounces, or a little more.

M. Bizot determined the capacity of the ventricles by laying open their cavities, and measuring accurately the internal surface from above downwards, and transversely. From his researches it appears that both ventricles are wider than long in both sexes, and at every age; that the length, but particularly the breadth of the right ventricle, exceeds that of the left at all ages; that the capacity of the ventricles is greater in the male than the female; and that the relative capacity of the two ventricles is pretty nearly the same in advanced life and in infancy.

The following table, given by him, shows the average dimensions (in lines) of the interior of the cavities of both ventricles in the two sexes, and at different ages:—

MALE.			FEMALE.		
Age.	Length.	Width.	Age.	Length.	Width.
16 to 29	33 $\frac{1}{4}$	51 $\frac{1}{8}$	16 to 29	29 $\frac{1}{2}$	47 $\frac{1}{8}$
30 " 49	29 $\frac{1}{4}$	53 $\frac{1}{8}$	30 " 49	31 $\frac{1}{4}$	46 $\frac{1}{4}$
50 " 79	36	56 $\frac{1}{2}$	50 " 79	31	49 $\frac{1}{2}$
Mean average between 15 and 79	34 $\frac{1}{4}$	54 $\frac{1}{2}$	Mean average between 15 and 89	31 $\frac{1}{4}$	48 $\frac{1}{2}$

Right Ventricle.					
Age.	Length.	Width.	Age.	Length.	Width.
16 to 29	36 $\frac{1}{4}$	79 $\frac{1}{8}$	16 to 29	35	74 $\frac{1}{2}$
30 " 49	37 $\frac{1}{4}$	83 $\frac{1}{2}$	30 " 49	33 $\frac{1}{2}$	76 $\frac{1}{2}$
50 " 79	37 $\frac{1}{4}$	87	50 " 79	35 $\frac{1}{4}$	76
Mean average between 15 and 79	37 $\frac{1}{4}$	82 $\frac{1}{4}$	Mean average between 15 and 89	34	76 $\frac{1}{2}$

* Cyclopædia of Anatomy and Physiology.

The capacity of the right auricle exceeds that of the left: the proportions established in the "Mémoires de l'Académie" between them are as twenty-four to thirteen; according to Santorini, as five to three; but the inequality is seldom so marked in the perfectly healthy heart. According to Dr. Sibson,* the capacity of the right auricle is about the same as that of the right ventricle; while the capacity of the left auricle is less than that of the left ventricle. He, however, estimates the capacity of both ventricles as the same.

Conclusions respecting the capacity of the cavities of the heart.

1. The capacity of both ventricles increases gradually as life advances in both sexes, the increase being more rapid in youth.

2. The ratio between the capacity of each ventricle is pretty nearly the same at all ages.

3. The capacity of both ventricles is greater in the male than in the female.

4. The capacity of the right ventricle much exceeds that of the left at all ages, and in both sexes.

5. The right ventricle holds, when moderately distended, about two fluid-ounces; the left ventricle about one ounce and a half.

6. The capacity of the right auricle exceeds that of the left; and the capacity of the auricles is greater than that of the corresponding ventricles; but further statistics are required under this head.

Diameter of the orifices.—The size, as well as the shape, of the arterial and auriculo-ventricular orifices is different: the former have a circular, the latter rather an elliptic form; the left auriculo-ventricular orifice has more of a crescentic shape than the right. The orifices of the right side of the heart exceed in size those of the left: this, however, applies more to the auriculo-ventricular than to the arterial orifices, as in advanced life the aortic orifice rather exceeds the pulmonary in size. M. Bizot's researches likewise show that the diameter of all the orifices of the heart is greater in the male than in the female, and that their size progressively increases as life advances in both sexes from puberty to old age.

In order to determine the diameter of the orifices of the heart, the most convenient method is to lay open the part by an incision through it, and take its circumference, from which the diameter is

readily calculated. When the orifice is diseased, or if we wish to preserve the preparation, we must be content with measuring the diameter by means of a pair of compasses.

Right auriculo-ventricular orifice.—According to Cruveilhier, the long diameter of this orifice is from sixteen to eighteen lines; its short diameter twelve lines. M. Bouillaud found the average circumference of this orifice in three healthy hearts to be three inches ten lines; the maximum being four inches, the minimum three inches nine lines. According to Dr. Ranking, the mean circumference of this orifice in fifteen males was 4 inches 85-48ths; in seventeen females, 4 inches 8-48ths. In the measurements which I have made, I have found the long diameter of this orifice to range between fourteen and sixteen lines and a half.

The following table, given by M. Bizot, shows the mean circumference (in lines) of this orifice at different ages in the male and female.

Right auriculo-ventricular orifice.

MALE.		FEMALE.	
Age.	Lines.	Age.	Lines.
16 to 29	50 9-19	16 to 29	37 12-13
30 „ 49	54 5-23	30 „ 49	47 4-27
50 „ 79	57½	50 „ 89	49 13-19
Mean average between		Mean average between	
16 and 79	54 12-61	16 and 89	48½

Left auriculo-ventricular orifice.—According to Cruveilhier, the long diameter of this orifice is from thirteen to fourteen lines; its short diameter from nine to ten lines. M. Bouillaud states that the average circumference in three hearts examined by him was 3 inches 6½ lines; the maximum being 3 inches 10 lines, the minimum 3 inches 3 lines. According to Dr. Ranking, the mean circumference of this orifice in the male is 3 inches 45-48ths; in the female, 3 inches 22-48ths. In the examinations which I have made, the long diameter of this orifice, measured from the auricle, ranges between ten and twelve lines.

M. Bizot has given the following table of the mean circumference (in lines) of this orifice in the two sexes at different ages:—

* Trans. of Prov. Association, vol. xii.

Left auriculo-ventricular orifice.

Male.		Female.	
Age.	Lines.	Age.	Lines.
16 to 29	41	16 to 29	38
30 „ 49	48 9-22	30 „ 49	40 17-26
50 „ 79	48 13-19	50 „ 89	44 4-19
Mean average between 16 and 79	45 17-30	Mean average between 16 and 89	41½

Aortic orifice.—According to M. Bouillaud, the average circumference of the aortic orifice in four healthy hearts was 2 inches 5½ lines; the maximum being 2 inches 8 lines; the minimum, 2 inches 4 lines. According to Dr. Ranking, the mean circumference of this orifice, on a line with the insertion of the semilunar valves, in fifteen males between twenty-six and sixty-five years of age, was nearly 2½ inches; in seventeen females, between eighteen and sixty-two years of age, 2 inches 22-48ths. According to Dr. Chevers, the circumference of the aortic orifice, immediately below the semilunar valves, is 36½ lines; above them, 34 lines. In the examinations which I have made I have found the diameter of this orifice to range between ten and twelve lines. The accompanying table, given by M. Bizot, shows the mean circumference (in lines) of the aortic orifice, at the free border of the semilunar valves, in the male and female, at different ages.

Aortic orifice.

Male.		Female.	
Age.	Lines.	Age.	Lines.
16 to 29	26 10-19	16 to 29	24 3-9
30 „ 49	30 20-23	30 „ 49	28 3-27
50 „ 79	36	50 „ 89	32 5-6
Mean average between 16 and 79	31 15-61	Mean average between 16 and 89	28 4-5

Pulmonary orifice.—M. Bouillaud found the mean circumference of the pulmonary orifice in four healthy hearts to be 2 inches 7½ lines; the maximum being 2 inches 10 lines; the minimum, 2 inches 6 lines. According to Dr. Ranking, the mean circumference of the pulmonary orifice in the male is 2 inches 34-48ths; in the female, 2 inches 24-48ths.

The following table, given by M. Bizot, shows the mean circumference (in lines) of

this orifice, at the free border of the sigmoid valves.

Pulmonary orifice.

Male.		Female.	
Age.	Lines.	Age.	Lines.
16 to 29	29 2-19	16 to 29	28 3-14
30 „ 49	31 12-23	30 „ 49	29½
50 „ 79	35	50 „ 89	32 17-36
Mean average between 16 and 79	32 21-61	Mean average between 16 and 89	30 7-66

Conclusions respecting the diameter of the orifices of the heart.—From the preceding details it appears that—

1. The diameter of all the orifices of the heart is greater in the male than the female at every age.
2. The diameter of all the orifices of the heart increases gradually from birth to old age in both sexes.
3. The auriculo-ventricular orifices exceed the arterial orifices in size at every age, and in both sexes.
4. The right auriculo-ventricular orifice exceeds the left in size in both sexes, and at every period of life, except in the female between the ages of sixteen and twenty-nine, when, according to M. Bizot, there is a very slight excess of the left over the right.
5. The pulmonary orifice exceeds the aortic orifice in size in both sexes, up to the age of fifty; after this period the aortic orifice slightly exceeds the pulmonary orifice.

6. The mean circumference of the right auriculo-ventricular orifice, in the healthy heart of the male, in advanced life, when the orifices of the heart attain their maximum size,—viz. between fifty and seventy-nine years of age—is, omitting fractions of lines, 4 inches 9 lines; of the left auriculo-ventricular orifice, four inches.

7. The mean circumference of the right auriculo-ventricular orifice in the female, between fifty and eighty-nine years of age, is (omitting fractions of lines) 4 inches 1 line; of the left, 3 inches 8 lines.

8. The mean circumference of the pulmonary orifice in the male in advanced life is 2 inches 11 lines; of the aortic orifice, 3 inches.

9. The mean circumference of the pulmonary orifice in the female, between sixteen and eighty-nine years of age, is about 2 inches 8 lines; of the aortic orifice, 2 inches 8 lines.

Relative position of the several parts of the heart to the parietes of the chest.—A knowledge of the exact position of the several

parts of the heart, particularly of its valves and orifices, and of their relation to fixed points on the parietes of the chest, is of considerable importance in the diagnosis of the diseases of this organ, as it enables us to determine the size of the heart in the living subject, to ascertain whether it is increased or diminished in any of its diameters, or whether it is displaced, and the amount of the displacement; and by it we can often determine which of the valves or orifices is diseased, as well as the nature of the morbid change.

The apex and body of the heart being capable of some change of position, according to the posture of the patient, and according to the motions of the diaphragm, and the base of the organ, from which the large vessels proceed, being more fixed, the latter is the most convenient point from which to trace the outline of the heart, or to determine what parts correspond to certain fixed points upon the surface of the chest.

The sternum in front, with the cartilages of the true ribs, laterally form, in a great measure, the anterior boundaries of the heart; a small portion only of this organ near its apex extends on the left side beyond the cartilages of the ribs. The base of the ventricular portion of the heart is from three to three and a half inches below the clavicle, and on a line with the junction of the cartilage of the third left rib with the sternum. The impulse of the apex of the organ is felt between the fifth and sixth left ribs, near where the body of these ribs joins the cartilage. A line, therefore, drawn between these two points gives the length of the ventricular portion of the healthy heart. In addition, the nipple in the male constitutes a useful guide: it is situated immediately opposite the lower edge of the fourth rib, a little more than an inch to the left of the junction of this rib with its cartilage. Thus we have a certain number of well-marked and easily distinguished points, to which any part of the heart situated underneath can be readily referred. It is necessary, however, to bear in mind (Dr. Sibson* observes) in examining the dead subject, that the lower margin of the pericardial sac is lower than the margin of the heart, as this organ, after the last vital contraction, contains less blood than during life, and retracts upwards.

The greater portion of the *right ventricle* lies behind the sternum; a portion of its upper part extends to the right of this bone, and its apex extends to the left of the sternum.

All the anterior surface of the *left ven-*

tricle is to the left of the sternum; its left margin reaches to the nipple on the left side.

The *right auricle* is to the right of the sternum; its appendix lies behind the cartilage of the third right rib; its tip rests against the right side of the ascending portion of the arch of the aorta, and is on a line with the pulmonary valves.

The appendix of the *left auricle* is the only portion of it which is seen when the pericardium is laid open; it lies behind the cartilage of the third left rib, close to the sternum, resting against the left side of the commencement of the pulmonary artery.

The base of the heart,—that is, of the auricular portion,—is on a line with the interval between the junction of the second and third ribs with the sternum, the greater portion of it being under the sternum.

The base of the ventricular portion of the heart on the left side rises as high as a line drawn across the junction of the cartilage of the third left rib with the sternum; that is, about three inches below the clavicle on that side. On the right side, owing to the oblique position of the heart, the base of the right ventricle corresponds to a line across the upper margin of the junction of the cartilage of the fourth right rib with the sternum.

The apex of the left ventricle is a little below the fifth left rib, to the left of the junction of this rib with its cartilage, and on a line with the articulation of the xiphoid cartilage with the sternum.

Relative Position of the Orifices of the Heart to the Parietes of the Chest.

The *right auriculo-ventricular orifice* lies behind the centre of the sternum, on a line with the lower margin of the articulation of the cartilages of the fourth ribs with the sternum.

The *left auriculo-ventricular orifice* lies behind the cartilage of the fourth left rib, near the sternum.

The *pulmonary valves* are on a line with the space between the cartilages of the second and third ribs, to the left of the sternum, and very close to this bone. In some instances they lie a little lower down,—viz. on a line with the junction of the cartilage of the third left rib with the sternum, and immediately under it.

The *aortic valves* lie behind the sternum, on a line with the junction of the cartilages of the third ribs with the sternum, and towards the left edge of this bone. When the valves of the pulmonary artery are situated lower down, the semilunar valves of the aorta will be lower also, and on a line with the interval between the insertion of the cartilages of the third and fourth ribs.

* Trans. of Prov. Association, vol. xii.

The free edge of the semilunar valves of the aorta corresponds accurately, M. Gendrin observes, to the base of the pulmonary valves. A line drawn across the inferior margin of the third ribs corresponds to the base of the valves of the pulmonary artery, and to the free border of the aortic valves.

Relative Position of the Orifices of the Heart to one another.

The right ventricle ascends higher than the left, and the left ventricle descends lower than the right. Hence the origin of the pulmonary artery is on a plane above that of the aorta.

The pulmonary orifice is the highest up, as well as the most anterior, of all the orifices of the heart. The aortic orifice lies behind it, and on a plane lower down. The left auriculo-ventricular orifice is immediately behind the aortic orifice, but on a plane lower down. The right auriculo-ventricular orifice is nearly on the same plane as the left, but more anterior.

Relative Position of the Large Vessels to the Parietes.

Aorta.—The ascending portion of the arch of the aorta comes to the right of the sternum, between the cartilages of the second and third ribs. In this part of its course it is within the pericardial sac, and in the dead subject lies at the depth of one inch and a half from the surface, the margin of the right lung and the pericardium being between it and the parietes of the chest. The transverse portion of the arch of the aorta crosses the trachea at the centre of the first bone of the sternum, on a line with the lower margin of the articulation of the cartilages of the first ribs with the sternum, and at a still greater depth from the surface. The arch of the aorta approaches most closely to the parietes at the point at which the *arteria innominata* comes off; that is, on a line with the junction of the cartilage of the second right rib with the sternum.

Pulmonary artery.—The origin of the pulmonary artery is on a line with the junction of the cartilages of the third ribs with the sternum; the tip of the left auricle resting against its left side: it ascends about two inches before it divides; and a portion of the margin of the vessel here comes to the left of the sternum, between the cartilages of the second and third ribs. The division of the artery is on a line with the upper edge of the cartilage of the second ribs, where they join the sternum, the apex of the pericardial sac being on a line with the junction of the cartilages of the second ribs with the sternum, though it is sometimes higher up, and on a line with the cartilage of the first ribs.

Original Communications.

ON THE
PRESENT STATE OF LUNACY, AND
OF LUNATIC ASYLUMS,

AND ON THE NATURE AND TREATMENT
OF MENTAL DERANGEMENT.

BY WILLIAM SMITH,

Member of the Association of Medical Officers of Hospitals for the Insane; formerly Resident Surgeon in the Lincoln Lunatic Asylum, and subsequently in the General Hospital at Lincoln.

(Read before the Medico-Chirurgical Society of Nottingham, December 7th, 1849.)

[Continued from p. 64.]

If there be such an amount (nearly 10,000 cases) of chronic and incurable insanity in England and Wales, and further, if it can be proved that out of London the mass of medical practitioners, and the rising generation of professional men, have no opportunities for clinical instruction in mental disorders, surely the time has now arrived for the legislature to take proper measures for remedying this monstrous evil. The welfare of nearly 10,000 of our fellow-creatures, suffering under a dire and distressing malady, and left of that faculty which elevates man above the brute creation, is worthy of the attention of a fraternal government. I trust the day is not far distant (and I shall rejoice to see it) when the wards of every public lunatic hospital throughout the kingdom shall be thrown open for the purposes of clinical instruction, so that the medical and moral treatment of the insane shall no longer be a "sealed book" to the mass of medical practitioners. The old and unfounded prejudice, that lunatics were injuriously excited by such visitation, is now assigned "to the tomb of the Capulets." To Dr. Charlesworth, the veteran physician of the Lincoln Asylum, is undoubtedly due the merit of having first laid down this principle, in an admirable letter, addressed to a General Board of Governors of that asylum, so far back as October 1828. The examples of Hanwell, the Royal Hospital of Bethlehem, and St. Luke's, have clearly demonstrated the entire practicability of the plan, and the great value of clinical instruction in this most important branch of medical science. Nay more, —I would say that no legal commu-

sioner in lunacy should hereafter be appointed who had not made himself cognizant (in the wards of a lunatic hospital) with the phenomena of insanity. Immortal honour to Dr. Conolly and the justices of Hanwell, for having dared to burst asunder the trammels of ancient prejudices, and follow the dictates of humanity and benevolence! One other point in connection with this subject I feel it almost a duty to mention this evening,—namely, that, in my humble opinion, Government ought to require of the various medical licensing bodies throughout the united kingdom that every individual hereafter entering the portals of the medical profession (whether as physician, surgeon, or apothecary) should be strictly examined by competent judges touching his practical acquaintance with the diagnosis and treatment of mental disorders. The editor of the Medical Times has recently proposed a further amendment of the law of lunacy; but that, so far as my observation and experience go, would not remedy the existing evils. The *fons et origo mali* is just this. The early, and therefore most curable, stage of insanity is usually treated by those who have no practical acquaintance with the disease; and it is only when it has become confirmed and (too often, I fear) rendered intractable by improper treatment, that the patient is removed to a proper hospital; and in this respect the pauper, without money or friends, is often better cared for than the wealthy and the aristocratic. The desire for concealment of the malady, and the ban which society has most unjustly and mischievously placed upon the insane, have been fraught with innumerable evils.

In order to prove that my views of the nature or essence of insanity are not dissimilar to those entertained by many practitioners who have spent the greater part of their lives in "ministering to the mind diseased," I shall take leave to quote some extracts from the "Further Report of the Commissioners in Lunacy to the Lord Chancellor," pages 182-3:—"The medical men who have replied to our inquiries are nearly uniform in condemning the practice of venesection, or general bleeding, in ordinary maniacal cases. Dr. Sutherland says he never employs it; because, after the acute stage of the disorder has

passed, great prostration of strength generally follows; and the state of the body, exhausted by repeated paroxysms, is much the worse for the loss of blood. He adds that he has known death from exhaustion, and, in other instances, dementia, occasioned by bleeding. He considers the violent paroxysms of the acute stage of mania as depending, not on cerebral inflammation, but on irritation. He thinks that the arterial congestion which is found on post-mortem examinations in such cases is not the result of inflammation." At page 395 of the same Report are the following remarks:—"Dr. Wintle, (of the Warnford Asylum,) states, 'I hold insanity in all its forms, as we meet with it in hospitals, to be a disease of debility, and seldom admitting of depletion. The principal indications are, I believe, in mania, to subdue the excitement, procure sleep, and husband the strength; in melancholia, to produce a certain degree of excitement, induce sleep, and support the system. General bleeding can hardly ever be admissible, except for some accidental disease, and then it should be sparingly used. Topical bleeding might occasionally be beneficial, but I have not for many years used either.' Mr. Poynder, of the Kent Asylum, at page 400 remarks:—

'Treatment of acute mania.—Here the young practitioner might be led to suppose, from the violent excitement which prevails, that the vascular system needs relieving by the free use of the lancet; but bleeding will not cure mania; it will generally aggravate instead of alleviating the symptoms; for the loss of blood induces restlessness, and exhausts that strength which ought to be supported. The state of the pulse may be taken as a good criterion here, for it rarely, if ever, has the hard and incompressible beat which accompanies inflammation.'

"Dr. Kirkman, of the Suffolk County Asylum, observes, page 403:—"The views which I have taken of insanity, and successfully adopted for nearly thirty years, preclude recourse to any depletive measures, either by bleedings or antimonials. General bleeding previous to admission has confirmed many of our cases; and, on post-mortem examinations of others, who have died where it was known to have been employed, the appearances were rather the result of cerebral irritation than inflame-

matory action, or of sanguineous infiltration rather than inflammatory softening of substance."

In the same Report, page 481, Mr. Wilkes, the experienced superintendent of the Staffordshire County Lunatic Asylum, remarks:—"The injurious effects of active medical treatment in cases of mania, and the tendency there is to exhaustion and sinking, is so fully established, that the general practice in this asylum is chiefly directed to supporting the vital powers, subduing the cerebral irritation, and correcting the existing physical derangement, not by any peculiar or specific mode of treatment, but upon ordinary principles. In pure cases of mania, however great the excitement may be, general bleeding is never employed. The cerebral irritation is often materially relieved, and every advantage gained, by local bleeding, without materially depressing the patient's strength. For this purpose, leeches to the temples, or behind the ears, and cupping on the same parts, or on the nape of the neck, are the means usually employed, due regard being had, even in using these, to the amount of vascular action and condition of the patient."

In the *Lancet* for 1846, vol. ii. pages 151-2, I discussed this subject at considerable length; and, as the arguments and evidence there adduced are equally applicable at the present moment, I will briefly recapitulate some of the more important ones. Dr. Corsellis, the experienced physician of the Wakefield Asylum, in reply to a letter of mine on the subject of bloodletting in insanity, remarks:—"There cannot, I think, be two opinions as to the prejudicial effects of depletory measures in the treatment of insanity. I have now been here for nearly thirteen years, and have never in one instance used the lancet to overcome maniacal excitement. For the last three years general bleeding has not been resorted to more than twice, and in both cases in persons suffering from apoplexy consequent on epilepsy. Both patients died, I would not say from the bleeding, but certainly they were neither of them benefitted by the operation."

Dr W. F. A. Browne, of the Crichton Asylum, Dumfries, writes:—"As to bloodletting in mania, I have not used the lancet in the treatment of insanity since the publication of the paper

(On Bleeding in Mania, *Medico-Chirurgical Review*, vol. lxxviii. page 366), to which you allude, nor, I think, in all, for seven years, during which I have been entrusted with the care of the insane at Montrose and Dumfries. Be it observed, that even before that period I bled very cautiously, and only where insanity seemed to depend upon disease of the large viscera, where acute inflammation was superadded to insanity,—where, in fact, any one could have bled, and may be still justified; even then I dreaded the result, and suspected the soundness of the principle upon which I was proceeding. It is, of course, sometimes absolutely necessary to have recourse to depletion, for various reasons unconnected with the true and urgent features of the case; but, wherever it is possible, I adopt local bleeding as the safer practice. Latterly I have been somewhat sceptical of the utility of even this measure in nervous disease; although, in accordance with the experience and recommendation of others, I still adopt it. Two very obvious results attend the system you have so well described. It places the life of the patient in imminent danger; and, where this is not the case, it unquestionably protracts the period of violence, induces fatuity, and otherwise diminishes the chance and the rapidity of recovery. I have repeatedly received cases most injudiciously treated by bloodletting."

In the *LONDON MEDICAL GAZETTE* for February 2, 1849, I again entered upon the question of blood-letting in insanity, feeling assured, from the results of my own observation and experience at Lincoln and elsewhere, that the subject was not sufficiently understood by surgeons in general practice, and others having the charge of the insane poor: one extract from that paper, as recording the views of one of our most active and intelligent physicians engaged in psychological practice, I shall here transcribe. Dr. William Hutcheson, of the Glasgow Royal Lunatic Asylum, in reply to an inquiry of mine relative to his experience of blood-letting, remarks:—"I have never advocated blood-letting in insanity, and for many years have not directed it to be had recourse to even locally: when a case is reported to have been 'bled, blistered, and purged, as well as sickened,' I know well that it will prove either tedious or

incurable. If you will look to the 28th Annual Report of this Asylum, you will find, at pages 41 and 42, my opinion on the subject of blood-letting very decidedly given: to that I adhere, all my experience convincing me of its being correct. I have had nearly two thousand cases since that opinion was printed and published." In the report to which Dr. Hutcheson alludes, I find the following observations:—"In mere insanity, general blood-letting is never necessary; and, in nine cases out of ten, highly prejudicial. During the last year I have not directed the employment of the lancet once. Local blood-letting is sometimes useful, but must be very cautiously employed. I have seen no good result from it in cases of recurrent mania, in which it has been strongly recommended by some physicians. In the cases in which it is beneficial it can be employed with safety only at the commencement; even in diseases requiring blood-letting, which may occur during insanity, it must be cautiously employed, as the insane do not bear the loss of blood to a great amount well under any circumstances. I have seen more mischief arise from indiscriminate blood-letting in insanity than in all the abuses of other therapeutic means put together."

The illustrious Pinel, in his admirable work, has given us several graphic descriptions of the evils resulting from blood-letting in maniacal affections. At page 101 (translation by the late Dr. Davies), he says:—"A young man, already depressed by misfortune, lost his father, and in a few months after a mother, whom he tenderly loved. The consequence was, that he sunk into a profound melancholy; and his sleep and appetite forsook him. To these symptoms succeeded a most violent paroxysm of insanity. At a lunatic asylum, whither he was conveyed, he was treated in the usual way, by copious and repeated blood-letting, water and shower baths, low diet, and a rigorous system of coercion. Little or no change appeared in the state of the symptoms. The same routine was repeated, and even tried a third time without success, or rather with an exasperation of the symptoms. He was at length transferred to the Asylum de Bicêtre, and with him the character of a dangerous maniac. The governor, far from placing implicit confidence in the accuracy of this re-

port, allowed him to remain at liberty in his own apartment, in order more effectually to study his character and the nature of his derangement. The sombrous taciturnity of this young man, his great depression, his pensive air, together with some broken sentences which were heard to escape him on the subject of his misfortunes, afforded some insight into the nature of his insanity. The treatment most suitable to his case was evidently to console him, to sympathise with his misfortunes, and, after having gradually obtained his esteem and confidence, to dwell upon such circumstances as were calculated to cheer his prospects and to encourage his hopes. These means having been tried with some success, a circumstance happened which appeared to give countenance and efficiency to the consolatory conversations of the governor. His guardian, with a view to make his life more comfortable, now thought proper to make small remittances for his use; which he promised to repeat monthly. The first payment dispelled in a great measure his melancholy, and encouraged him to look forward to better days. At length he gradually recovered his strength. The signs of general health appeared in his countenance. His bodily functions were performed with regularity, and reason resumed her empire over his mind. His esteem for the governor was unbounded. This patient, who had been so grievously treated in another hospital, and consequently delivered to that of Bicêtre as a furious and dangerous maniac, is now become not only very manageable, but, from his affectionate disposition and sensibility, a very interesting young man." Now, this case, if viewed in the right light, is replete with instruction. It shows that mania and melancholy are one and the same thing, and not separate entities; it distinctly proves that maniacal or convulsive paroxysms (which all the mobility and restlessness of insanity really are) are exasperated by the withdrawal of blood, and is tantamount to, though slighter than, the last convulsive throes and kicks of the expiring sheep, with the butcher's knife in its throat: it demonstrates the inextricable union and sympathy existing between body and mind: it shows that harsh coercion, low diet, and arbitrary measures, strengthen the malady; whereas kindness and sympathy are healing

balm to the sufferer: and last, though not least, it proves that faith and unlimited confidence in the skill and humanity of the director of a lunatic hospital are beyond the vaunted spells of "Poppy, Mandrogara, or all the drowsy syrups of the East." Another case is recorded by the same indefatigable observer of disease, at page 88 of the work before alluded to. "A young soldier was dispatched from the army of La Vandée to Paris, in a state of great fury, and submitted to the usual treatment of the Hôtel Dieu. Venesection was repeatedly resorted to. After one of those operations it unfortunately happened that the bandage was displaced. Great hæmorrhage took place, and the patient sank into a state of syncope, which lasted for some time. He was transmitted to Bicêtre in a very debilitated condition. The sphincter ani had lost its power, his tongue had forgot its movements, his face was deadly pale, and all the functions of the understanding were obliterated. His father came to see him in this melancholy situation, was greatly affected, as might be supposed, and left some money towards the amelioration of his condition: wholesome food, and gradually increased in quantity, contributed by slow degrees to strengthen him, and to rouse his dormant faculties. The usual precursory symptoms preceded the explosion of an active paroxysm. His countenance was flushed, his eyes were wild and prominent, attended with febrile excitement, extreme agitation, and at length complete delirium. Thus raised to maniacal consequence, our hero sallied forth to the interior court of the hospital, and provoked and insulted every person that he met with as he went along. But as he abstained from active violence, his personal liberty was not abridged. He continued for twenty days in a state of delirious excitement, when a calm succeeded, and the dawn of reason faintly glimmered above the tempest. Moderate employment and regular exercise, co-operating with the energies of nature herself, restored him, in a short time, to the full enjoyment of his intellectual faculties. To secure, however, a solid and permanent cure, he was detained for six months after his recovery; and towards the decline of autumn he was restored to his family."

[To be continued.]

A CASE OF
ACUTE EPIDEMIC BRONCHITIS IN
AN INFANT THIRTEEN DAYS
OLD.

IMPENDING SUFFOCATION.—AN UNUSUAL
PRACTICE FOLLOWED BY SUCCESS.

*Read before the South London Medical
Society, Jan. 17th, 1850.*

By R. R. ROBINSON,

President of the Society, Member of the Pathological Society of London, and late Surgeon to the London Dispensary.

OCTOBER 21, 1842.—On the 19th instant I was requested to see Mrs. —'s infant, a female, æt. thirteen days, who, for two or three days previously, had had the *snuffles*. She lately coughed a little, but there was not much wheezing nor rapidity of breathing, and she sucked well. Ipecacuan was ordered, the bowels were regulated with manna, and a grain of mercury with chalk was given at night. The next morning, however, not being quite so well, having a little more wheezing and more cough, I applied a blister the size of a shilling to the chest. I was called to her, however, just now (12 p.m.), and found her in a state almost approaching asphyxia. The breathing was exceedingly hurried, face livid, pulse feeble, skin warm, senses oppressed, and a rattling from mucus in the air-cells was heard all over the chest. I instantly ordered her into a warm bath: this made her cry and cough a little, and produced a temporary improved condition and less lividity. These symptoms, however, soon returned; she became low and languid; mother's milk was poured down her throat, and five minims of aromatic spirit of ammonia was given every two hours. The bath was repeated.

Oct. 22, 1 p.m.—The blister had risen partially, but there seemed no hope for the child. She lay in a complete stupor, was perfectly black in the face, cold, the breathing was awfully rapid, and the pulse was a mere flutter. I decided on making every effort to remove the mucus which prevented the air and blood from coming into contact with each other. Accordingly, in spite of the remonstrances of grandmother and nurse, I again ordered the warm bath; and, as it produced no good effect,

not even in rousing the infant, *I plunged her thence into a cold bath*, and this making her cry lustily, a little phlegm was removed. *I then replaced her, after five minutes, in the warm bath*; but the torpor and lividity returning, I plunged her back again into cold water, and she again crying heartily, a little more phlegm was coughed up into the upper part of the throat, but was not expectorated. The child being very much chilled by this practice, and shivering being produced, I returned her into the warm bath; and, after remaining there for five minutes, I had her wrapt in a blanket, and placed before the fire. Perceiving, from the lividity and stupor returning, that the suffocating cause in a great measure continued, and that emetics, even *vin. ant. tart.*, owing to this state of stupor, did not operate, I determined to tickle the fauces with a feather. This plan, though perseveringly used for more than an hour, did not make the child sick, but I succeeded in getting up *nearly two teaspoonfuls of frothy bloody mucus, with small specks of purulent-looking substance*. Once or twice, from the great efforts necessary to relieve the fauces, the child was all but suffocated; yet, upon the removal of the mucus, the child, from appearing a livid corpse, to the astonishment of the nurse, wonderfully revived, opened her eyelids, which before were continually shut: her natural aspect was restored, and the skin, losing its lividity, assumed its usual colour. She took now small quantities of milk.

Oct. 23.—This improved condition, so gratifying a reward for my perseverance, did not last long. The stupor and lividity returned, and the child appeared sinking into her former condition, so that hope was almost lost. A blister was ordered to be placed all across the chest, small doses of brandy and water to be given warm, and small doses of calomel and antimonial powder to be given night and morning. This advice was at first disregarded, but the father determined it should be adopted. The skin became warmer; she coughed occasionally; and hopes, although very faint ones, were revived.

25th.—Surprising to state, the child continued till this morning apparently between life and death. She passed some urine; the bowels were opened; she took milk out of a spoon, coughed now and then, and was decidedly less

livid. The blister, *which has been left on till now*, is beginning to rise. The mother, from anxiety, lost her milk, and I therefore ordered asses' milk, and a grain of sesquicarb. of ammonia in syrup and water, *ter die*.

26th.—Is decidedly revived; the lividity is gone. She cries very much, probably from the soreness of the blistered surface, which is very extensively inflamed. Takes food freely, and looks about. No sleep last night. *Mist. Potass. Nit. ʒi.; Acidi Prussici, gr. ij.; Tr. Opii, gr. j. third part ter die.*

From this time all went on satisfactorily. The opium was continued for two days, and tranquillised the nervous system. Hyoscyamus was then substituted. Small doses of mercury, and antimonial powder, together with the blister, cured the catarrh. She is now a hearty and healthy baby.

I learned subsequently that the attack was produced by the nurse letting out the fire (in a cold and damp season), in consequence of the room being filled with smoke.

Having detailed the particulars of the case, I will submit to the Society a few observations upon it; and these I shall arrange under the following heads:—

1. The age of the patient.
2. The nature and intensity of the disease.
3. The mode of treatment.
4. Its propriety.
5. Its results.
6. The benefits of perseverance in medical treatment.
7. The injury from the interference of relatives with medical treatment.

1. *The age of the patient.*—This case I believe to be interesting from the age alone of the patient. Much as I have seen of practice, and extensive as has been my experience in infantile diseases, and although the tables of mortality show that one-third of deaths under five years are due to diseases of the respiratory organs, I do not recollect any case of bronchitis in so young a subject. Snuffles or coryza, indeed, is a very common inflammatory affection of the Schneiderian membrane, but the extension of that inflammation along the trachea to the bronchial membrane, producing bronchitis, I have never before met with at so early an age. That it is really an uncommon affection, I am borne out in maintaining, by the following observations contained in Dr. West's Lectures,—

a work full of most excellent and practical observations on the diseases of early life, and one which may be fairly considered a standard work upon such a subject. It is a curious fact, however, to which Professor Jörg, of Leipsic, was the first person to call attention, "that this extreme susceptibility of the lining membrane of the respiratory apparatus *does not exist* to the same degree during the *first month or two* of life, as it does afterwards. The exposure of an infant two or three weeks old to a low temperature, or to a vitiated atmosphere, would be followed by disturbance of the function of the liver, and the occurrence of jaundice; or perhaps the muscular power might be so far depressed as to render the child incapable of taking a full inspiration, so that its lungs collapse, and it dies from disorder of the respiratory organs, but without the cough or bronchitic symptoms, which would not fail, were it a little older, to announce the irritation of the mucous membrane of the air tubes. Why this should be so I do not know, but suppose it to be the result of the generally feeble vitality which renders the lining of the bronchi less susceptible, just as that of the intestine also seems to be at the same period, since while constipation is frequent, diarrhoea is comparatively rare during the first two months of life."

—Lect. xv. p. 166.

The nature and intensity of the disease.—I have called this a case of bronchitis, by which I mean an inflammation beginning in the mucous membrane of the bronchial tubes, and extending to the air cells without affecting the *cellular parenchyma of the lung itself*, which I consider as genuine pneumonia: as, however, physiologists do not admit that the mucous membrane extends to the air-cells, and as in the earlier stage of pneumonia, in lungs so much impeded in their function as this infant's lungs were, the physical sounds are not so clearly developed as in persons of more advanced life, I do not presume that my opinion is altogether correct in this respect, and I should particularly like to hear the observations of those whose experience is great upon this subject. Although I admit that some doubt may exist as to whether this was a case of genuine bronchitis, or broncho-pneumonia, there can, I think, be but one opinion as to its intensity. That it was an acute attack, the very early age of

the patient, the rapidity with which it came on, and the short period which elapsed before the child was almost moribund, are, I think, sufficient reasons for entertaining this opinion. The disease originated from cold, in a season when influenza was about, and which consequently must have modified the kind of inflammation.

Mode of treatment.—Another, and I may perhaps say the principal reason I have for bringing this case before the Society, is the mode of treatment adopted, which in some respects I believe to have been peculiar, and such as I do not recollect having heard of before. The first indications were obvious enough: to put the child in a warm bath, and administer emetics, would probably be adopted by most practitioners in the first instance; and ipecacuan would also be that which would generally be selected: but it will be perceived that ʒiv. of Vin. Ipecac. procured from a good source, were given to this infant in divided ʒj. doses, repeated every quarter of an hour, without any effect: tartarized antimony was then tried, but with an equally unsuccessful result. It then occurred to me that if I could make the child cry I should relieve the air-cells of mucus, and thus allow more air, and of a purer quality, to enter the air-cells; and I knew of no way more likely to effect this than to thrust the child first into a warm bath, and then into a cold one, and as occasion required to repeat those baths: the effect has already been stated. Some, but not sufficient ground being gained by this plan, I next thought, emetics completely failing to remove the mucus from the air-tube, that tickling the fauces was likely to effect my object; and the desperate nature of the case is apparent from the length of time that those efforts were used.

Propriety of the treatment.—The treatment seemed cruel, but nothing else suggested itself, and the result was fortunate.

Results of the treatment.—Although I am as ready as any one to admit that success is not always a proof of the propriety of treatment, and that post hoc ergo propter hoc is very frequently erroneous in medicine, I cannot but think that in this instance success was the result of treatment, and that, moreover, it was founded upon correct principles. Three things were to be

accomplished immediately:—suffocation was to be prevented; the strength of the little patient was to be kept up, and the inflammation was to be subdued. It was not an easy matter to prevent instant suffocation. Notwithstanding ipecacuanha, tartarized antimony, five baths, alternately hot and cold, tickling the fauces perseveringly for an hour, and warmth sedulously applied to the surface: notwithstanding all these means, I say, the child was only just kept alive,—I might say in a state of hybernation; but so kept alive that brandy, ammonia, and the mother's milk, could be got down and taken into the system; and by these means sufficient time was given, and sufficient powers of life maintained, to allow of the antiphlogistic remedies.

As there is much difference of opinion about the application of blisters to children, I will here mention that I have had great experience upon this point, and have never, with the exception of the present case, had any difficulty in healing them. The blister here was a large one: in ordinary cases I apply them seldom larger than a shilling, with oiled silver paper interposed, and do not allow them to remain on longer than three hours.

Benefits of Perseverance.—Another point I have had in view in narrating this case is the benefit resulting from perseverance in medicine. I believe for want of this, especially in infantile diseases, many cases are fatal that might have ended otherwise. It is natural, when a patient seems almost in articulo mortis, that efforts should be paralysed: this case, however, shows the importance of trying remedies to the utmost. I am firmly of opinion that had the baths not been used, the child would never have cried; if it had not cried the mucus would not have been passed into the trachea, and had not the fauces been so irritated, mucus would not have been expelled; the air would never have reached the lungs, and the child would have died from suffocation. Again, had not the nourishment been given, although it seemed of no avail, and had not so large a blister been applied, and the other remedies used, the child would have been lost from inflammation.

I relate this case, therefore, to show the good effects that may be the result of perseverance in spite of the opposition of relatives: and even if success does not follow our exertions, and we

get obloquy where we ought to get gratitude, we shall have the satisfaction of feeling that we have done our duty in exerting ourselves to the uttermost to save life; and if we have no other satisfaction, we shall be abundantly recompensed in the quieting and comforting assurance of the "*mens conscia recti*."

ALCOHOL IN THE BLOOD OF DRUNKARDS.

DR. G. S. JONES has communicated the following case to the Boston Medical Journal:—

I was called in great haste to see a patient who was represented to be in a dying condition; and, on my arrival at the house, I *really* found him sick, but far from being as bad as was represented. My patient had a severe attack of pleuritis. The symptoms being very urgent I thought proper to take blood. The peculiar odour emitted by the blood while running from the vein, together with the singular appearance it presented after remaining in the bowl some few minutes, led me to a further examination of it. One half (that is, lateral half) was of the normal appearance, when drawn from a patient labouring under an inflammatory affection; the other half had the appearance of milk upon the surface—so much so, that I questioned my assistants as to the fact, although I was quite positive of the vessel being perfectly clean when handed to me. I gave the bowl a rotatory motion, yet the fluid would not mingle, remaining just the same as when first observed. What is still more interesting, and to which my attention was attracted, were the fumes of *alcohol*, which were so strong that one would have supposed that article to have been thrown in among the blood. I did not apply a lighted taper to it, but have not the least doubt, if I had, I should have seen it ignite, burning with its lambent flame. Is it at all strange that we find in autopsies of those persons who are in the habitual use of alcoholic liquors, such depositions and concretions? Why should not their tissues be transformed when their *blood* is so charged with carbon and hydrogen, which is entirely foreign to its vitality? Disease, with all its concomitants, must needs make its ravages, the stomach suffering first, the function of assimilation destroyed; the brain, from continued narcotism, softens, breaks down, and the creature *dies*.

My patient, I learned, drank N.E. rum in large doses, often repeated.

* * * The writer should not have stopped half-way. He should have distilled the blood, and have proved that there was no olfactory illusion.

MEDICAL GAZETTE.

FRIDAY, FEBRUARY 15, 1850.

THE subjoined letters relating to the "Swiney Prize" affair were forwarded to us last week by Professor Syme, for publication in our columns:*

Dr. Paris to Mr. Syme.

SIR,—In a pamphlet entitled "A Letter to the Lord Advocate of Scotland on Medical Reform," with your name appended as its author, I find the following passage:—"It is not long ago since a College which has been the loudest in its demands for exclusive privileges, had confided to it the bestowal of a large sum of money, as a reward for distinction in a field of literature cultivated by authors of the highest eminence; and yet, incredible as it may seem, the President, without any claim, except the joint authorship of an old nearly forgotten publication, appropriated the prize to *himself* and the lawyer who had been his partner in the work. It is hardly necessary to remark that a College which supported their President in, and identified themselves with, the perpetration of such an outrage on decency and propriety, could not be safely trusted with any power of controlling the members of a liberal profession." Now, sir, there can be no doubt you allude to the adjudication of the "Swiney Prize" by a joint committee of the Society of Arts and of the College of Physicians, and that, without the prudent precaution of an inquiry as to its truth, you have unscrupulously adopted, and transferred to your pages, the false and scandalous statement of an anonymous libeller, published through the medium of an English medical periodical.

Such is the grave charge reiterated against me in your "Letter on Medical Reform."

* We have since received copies of these letters from Dr. Paris, with a request for immediate insertion. It therefore appears that both parties eagerly seek publicity.

I meet it with a flat denial. A sum of money to the amount of £5000 was left to the Society of Arts, upon condition that once in every five years that Society should, in conjunction with Fellows of the College of Physicians, present to the author of a published work on the subject of jurisprudence, a silver vase of the value of one hundred pounds, containing a purse of the same value. I am not, nor ever was, a member of the Society of Arts. The whole matter was settled by the Society of Arts and three Fellows of the College of Physicians (all College officers), in a committee held at the room of the former Society, over the proceedings and decision of which committee I had no control, either directly or indirectly. The position which you hold in the profession, and in society, makes it an imperative duty upon me to require that you will make your retraction as public as you have made your unfounded statement.—I am, sir,

Your humble servant,

(Signed) JOHN AYTON PARIS.

To James Syme, Esq., F.R.S.E.,
Professor of Clinical Surgery,
and President of the Royal
College of Surgeons of Edinburgh.

Mr. Syme to Dr. Paris.

Edinburgh: Feb. 4, 1850.

SIR,—I beg to acknowledge the receipt of your letter, and regret that absence from town yesterday in a distant part of the country prevented me from replying to it immediately.

In referring to the "Swiney" affair in my Letter to the Lord Advocate, which was published three months ago, I entertained the fullest persuasion, from your silence during the long period which had elapsed since the subject was discussed in the medical journals, that you admitted the allegation in question to be substantially correct; this allegation being that the prize had been bestowed through the agency of certain officials of the College of Physicians, and that your presidential influence had guided its direction.

This charge was not whispered or insinuated by "an anonymous libeller," but

was openly and repeatedly set forth in the leading articles of a respectable medical journal—"THE LONDON MEDICAL GAZETTE," which has always been supposed to possess the confidence and support of the London Colleges. Having been thus established, and receiving no contradiction or explanation, it was, I believe, credited by every member of the medical profession, not excepting the Fellows of your own College, if I may judge from the correspondence which I have had with some of them in regard to it. In these circumstances, how was it possible for me to doubt the truth of the statement? and what steps you may have deemed it incumbent upon me to take for ascertaining its accuracy I am altogether at a loss to imagine.

It now only remains for me to express the pleasure with which I have received your contradiction of the conduct imputed to you, and to assure you that I shall be happy to use every proper means in my power to give it the most extensive publicity.—I am, sir,

Your most obedient servant,

JAMES SYME.

To Dr. Paris, President of the
Royal College of Physicians of
London.

We would willingly have been spared the necessity of reverting to this painful, and in our opinion disgraceful, transaction; but the pointed manner in which some "English medical periodical" is alluded to by Dr. Paris, and the fact that the "LONDON MEDICAL GAZETTE" is quoted by Professor Syme as his authority, are circumstances which render it absolutely necessary to our own vindication that we should ascertain what it is that Dr. Paris has met with a "flat denial," and what Professor Syme has retracted.

In these remarks we feel bound to treat Dr. Paris as a medical author, receiving a prize for a medical book under circumstances on which every medical journalist has a right to express a public

opinion. If those circumstances be fair and honourable, then the publication of them must redound to the credit of the prize-holder: if the contrary, the prizeholder and the judges must submit to that condemnation which, in the opinion of the profession, their conduct may deserve. The Republic of Letters recognises no President, and does not admit of any Presidential influence, either direct or indirect, in the dispensation of prizes or rewards of merit. Further, there never was an instance yet in which a deserving prize-holder, who had gained by fair and honourable means the great object of his ambition, courted secrecy: on the contrary, by the honest publication of the whole of the facts connected with the award, he only added to his reputation in the opinion of the public or of the profession to which he belonged. The remarks which we have already felt called upon to make relative to the SWINEY PRIZE did not merely refer to the mode of awarding it on this the first occasion of its distribution, but to all time. The Swiney endowment, it must be remembered, is for ever! In this instance the President of the Royal College of Physicians of London, in conjunction with a Commissioner of her Majesty's Court of Bankruptcy, although, judging from Dr. Paris's letter, they do not appear to have offered themselves as candidates, became the *recipients* of the first award under the will of an humble and unknown Scotch graduate. The circumstances attending the award were of so peculiar a character that, in order to prevent a repetition of them in 1854, or at any future quinquennial period, we, as an act of justice to that profession of which Dr. Swiney was a member, felt bound to give them all the publicity in our power. We were the more imperatively called upon to adopt this course, because some friend, or enemy,

as the case may have been, of the prizeholders and judges had shortly before caused to be published in the LANCET, MEDICAL TIMES, and ATHENÆUM, but not in the MEDICAL GAZETTE, a statement of the award of this prize calculated to deceive the profession and public respecting the facts, and to cast a slur upon the literary labours of such well-known writers as CHRISTISON and BECK.

In our article on the SWINEY PRIZE, published in this journal, on the 9th of February, 1849,* we quoted this puffing announcement, and proceeded to give our readers a statement of the facts connected with the award, as they had been already communicated to us by men of the highest integrity connected with the Royal College of Physicians and the Society of Arts. We contented ourselves with a bare statement of facts, and with the publication of an extract from the will of the eccentric Dr. Swiney, officially procured from the Prerogative Office in Doctors' Commons. Neither in this nor in a subsequent article on the subject, published in the same volume,† did we draw any inference regarding the part taken by Dr. Paris and the judges in this affair. The only portion of the article in which Dr. Paris's conduct is specially referred to is in the following paragraph :—

"Notwithstanding this, Dr. Paris, President of the College of Physicians, exercises the sole power of nomination, in a question in the result of which he is most deeply interested : and appoints as judges of the work or works on Medical Jurisprudence, three gentlemen, all of whom hold office with himself in the College—namely, Dr. F. Hawkins the Registrar, Dr. Monro the Treasurer, and Dr. Nairne a Censor!"—MED. GAZ. Feb. 9, 1849, p. 240.

Our contemporary the LANCET has the following passage in reference to Dr. Paris's share in the transaction :—

"Of course every one was curious to know by whom such an award was made. It turns out that the Society of Arts applied to the College of Physicians for assistance in adjudicating the prize. The President, Dr. Paris, assumed the authority of the entire College, and nominated Dr. Hawkins registrar ; Dr. Monro treasurer ; and Dr. Nairne censor, as three out of the six judges. Of course, in a medical decision, the other parties—there were six judges altogether—were subsidiary to the medical adjudicators. Thus Dr. Paris's three nominees kindly gave Dr. Paris the medical half of the prize, and we have not heard that Dr. Paris has had the delicacy to refuse the 100 sovereigns thus ingeniously conveyed to him."—LANCET, March 10, 1849.

The MEDICAL TIMES takes the following view of the decision :—

"But what objection can be raised against the acting Committee? Only, in the first place, that neither the Members of the Society of Arts generally, nor the Fellows of the Royal College of Physicians, had any share in the appointment of such Committee ; they were not consulted as to their will in the matter ; the circumstances and time of the award were shrouded in darkness from them. A few active Members of the Society of Arts took the onus of managing the entire matter on themselves, by appointing the Committee of three ; and, in the case of the College of Physicians, the matter was treated even more simply,—the President himself, Dr. Paris, nominated three of his co-functionaries of the College to act : with them the decision rested, the Society's Committee agreeing to be guided by it.

"Such a selection from the number of their brethren, many of whom were, unlike themselves, well known as having an acquaintance with Forensic Medicine, and some having in earlier life lectured, although not written, on the subject, was probably deemed some little honour, or mark of esteem, conferred on them by their friend the President : such a supposition being favoured by the result ; for these three so distinguished Fellows could find no other work on Medical Jurisprudence—perhaps owing to their not having seen another—than that produced twenty-five years ago by Dr. Paris, their august President, jointly with Mr. Fonblanque, a Commissioner of the Court of Bankruptcy, &c."—MEDICAL TIMES, April 28, 1849, p. 516.

Dr. Paris leaves it in doubt to which applies the term
generalibus

* See vol. xliii. p. 240.

† See vol. xliii. p. 373.

latet dolus. We nowhere used the language of Professor Syme—that Dr. Paris “appropriated the prize to himself and the lawyer who had been his partner in the work.” It is true that this was not an unreasonable inference from the *facts* which we published, and one which all the readers of this strange narrative would be likely to draw; but we hold ourselves responsible for the *facts* only, and not for the inferences. We asserted that Dr. Paris appointed three—i. e. one half—of the judges. The transaction stands thus recorded in the minutes of the Society of Arts, which we here republish*—

July 5, 1848.—Committee appointed, viz. Mr. Tooke, Dr. Harding, and Mr. Forster, to consider and report.

Oct. 6th.—Communication was entered into between the Committee and College of Physicians. *President requested by College to appoint a Committee*—Dr. Monro, Dr. F. Hawkins, and Dr. Nairne.

Reported to the Society, Jan. 17th, 1849.—That a work in 3 vols. 8vo. published in 1823, called *Medical Jurisprudence*, is the best work on the subject, and that the authors of it, J. A. Paris, M.D., and J. S. M. Fonblanque, are conjointly entitled to the bequest in question.

Moved by Mr. Webster, seconded by Mr. P. L. N. Forster, that the Swiney prize be presented as recommended.

Jan. 20th.—Mr. Tooke in the chair. The Swiney prize was presented.

We have ascertained from the respectable member of the Society of Arts who furnished us with this extract, comprising *all* the information contained in the books of this Society on the subject of the Swiney prize, that he copied it *verbatim* from the minutes, and that it is a true copy of the proceedings. It would have been very satisfactory if Dr. Paris had forwarded to Professor Syme, or published in some periodical, a report of the minutes at the meetings

of the College of Physicians in reference to the Swiney prize, with the names of the Fellows present on each occasion, and an account of the mode in which the three Office-bearers were appointed judges. This would have been better than loosely describing as “false and scandalous” a bare narrative of facts, which, so far as they are detailed in our pages, are strictly and undeniably true, and susceptible of proof, if necessary, in a Court of Law. Dr. Paris, in his letter to Professor Syme, does not deny that *he* nominated the three judges on the part of the College of Physicians, and the minute of the Society of Arts of Oct. 6th proves incontestably that this power of nomination was in some way or other conferred on him. He does not deny that he nominated three gentlemen who were subordinate Office-bearers in the College of which he is President. He does not deny that, while the College contains among its one hundred Fellows resident in London, men of eminence who have held, or still hold, Professorships of Medical Jurisprudence, he either selected, or allowed to be selected, as competent judges on this occasion, three gentlemen, “all College officers,” who, however respectable in their own departments, have not the slightest pretension to decide on the relative merits of works on this science. He does not deny that *he*, conjointly with Mr. Fonblanque, *received*, from the hands of judges so appointed, a testamentary prize intended for “the author of the *best* published work on Jurisprudence,”* and not, as

* Dr. Swiney's will in reference to the prize runs thus:—“A similar prize to the author of the *best published work on Jurisprudence*.” (See extract from will, *MED. GAZ.* vol. xliii. p. 240; also copy of the will at full length, same volume, p. 306.) Dr. Paris may have quoted from memory, and have inadvertently omitted the term “best;” but it is obvious that by this omission the meaning and object of the testamentary award are wholly changed. The term “best” implies *competition*, which is also indicated by the codicil being a substitution for a provision in the will regarding agricultural improvements, in which the great object of the testator was to excite emulation and active competition among

he states in his note to Professor Syme, for "the author of a *published work* on Jurisprudence." While he makes no denial of these circumstances, so important in reference to *his* share in the proceedings, he informs Professor Syme "that the *whole matter* was settled by the Society of Arts* and three Fellows of the College of Physicians, in a Committee held at the room of the former Society, *over the proceedings and decision of which Committee* I had no control, *either directly or indirectly.*"†

There were, it appears, only three judges on the part of the Society of Arts, and on a medical subject it was not unlikely that these judges would be influenced in their decision by the three Fellows of the College of Physicians. Mr. W. Tooke, F.R.S., and the other two judges of the Society of Arts, while they virtually rejected competition, and kept their proceedings so secret, that even old members of the Society could obtain no satisfactory information respecting the time or mode of adjudication, do not appear to have expressed any surprise that the only work produced and decided to be the best on the subject was one written by

candidates for the prize. We are sorry to have to point out another inadvertence in Dr. Paris's letter to Mr. Syme. He represents to that gentleman, in speaking of the terms of Dr. Swiney's will, that "that Society (the Society of Arts) should, in conjunction with Fellows of the College of Physicians, present," &c. The words of the will are—"to be adjudged by the Members themselves and the Fellows of the College of Physicians, &c." The omission of the article "the" makes a very serious difference in the signification of the passage. According to Dr. Paris's version, the nomination of any two Fellows would satisfy the terms of Dr. Swiney's bequest; but, taking the words employed by the testator himself, he clearly intended that the Fellows of the College of Physicians, as a body, should have a voice in the decision,—that they should all have a power of adjudication, or of conferring it upon a Committee chosen from among themselves after due notice had been given.

* We have authority for stating that the Members of the Society of Arts, as a body, were as ignorant of the proceedings and decision of the Committee regarding the Swiney prize until after it had taken place, as the Fellows of the Royal College of Physicians.

† We have placed some lines of this extract from Dr. Paris's letter in italics.

the gentleman who, according to their own minutes, had had authority to appoint one-half of the judges, and who was President of the College in which these judges were Office-bearers! On the other hand, Dr. Paris did not hesitate to *receive and retain* a prize so awarded, although he either knew, or might easily have ascertained by inquiry, that there had been no competition, and that there were in general circulation two very popular works,—the one by Dr. CHRISTISON, on Poisons in relation to Medical Jurisprudence, which had gone through four editions, and the other a most elaborate and learned Treatise on Medical Jurisprudence, by Dr. BECK, which had reached its seventh English edition. Dr. Paris, and the judges appointed by him to award this prize, had probably, however, not heard of these works, although they have been for some years in the hands of medical men and lawyers, and have deservedly gained for their authors a European reputation. We put the case in this its mildest form; for otherwise, it is impossible to suppose that the judges would have awarded the prize to a book which had been published twenty-six years previously, and *twelve years before the date of Dr. Swiney's will!* In the face of the splendid volumes of CHRISTISON and BECK, to pronounce that an obsolete book, which became unsaleable in its first edition, and which is neither used nor consulted by medical men or lawyers, was the "best work on the subject" (see Minutes of the Society of Arts *suprà*) must surely argue very great ignorance and incompetency on the part of the judges. It is, however, quite obvious that the judges in the Swiney case must submit to this imputation on their judgment, or to what is worse.

In conceding to Dr. Paris the full benefit of his statement, that the "whole" was settled by the Society of

Arts,—that he did not influence the decision of the Committee of Judges, either directly or indirectly, and by implication that he was absolutely ignorant of the fact that his own book, published in 1823, would be the only work selected by the Committee for their opinion and judgment,—it is inconceivable how he, the appointed nominator of three of the judges, should have received, and should still retain the prize! He must surely have considered, in the terms of the Report of the Committee, either that his own was really the best work on the subject, or that the Swiney prize had been most improperly awarded. He has the full benefit of either alternative.

It is not customary in the award of prizes to deny competition, to keep the whole of the proceedings secret up to the hour of adjudication, or to allow one who may, even without his knowledge, be made a candidate by the zeal of injudicious friends, to have the nomination of one-half of the judges, even when his merits as an author would deservedly entitle him to the award. *In foro conscientie*, he would, under such circumstances, be disqualified from receiving it. Some allowance must, however, be made in reference to the Swiney case. The testator himself was either insane or eccentric, and the managing gentlemen of the Society of Arts were evidently disposed to extend the eccentricity of the testator to the mode of awarding this quinquennial prize. Thus, notwithstanding their cool way of setting at defiance all those rules which are held by the vulgar as necessary to the equitable distribution of testamentary prizes and awards, the acting members of the Society of Arts actually crowned their proceedings in the Swiney case during the last summer by inserting the following paragraph in their Annual Report, under the head of *Competition* :—

"The Society will have observed that for three years past, a prize of twenty guineas has been offered for the best design for a silver cup, of which the design should be emblematical of *Justice*. The Council felt that in having to present a cup according to the will of the late Dr. Swiney, it was peculiarly within the province of the Society to provide that it should be an appropriate and fine work of art."*

Our readers will now be enabled to judge what it is that Dr. Paris meets with a "flat denial." He did not, as Professor Syme alleged, appropriate the prize to himself†: he did not take it *manu propria*, or influence the decision of the Committee of Judges in any way whatever: he merely nominated one-half of the judges,—“College officers” under himself,—and accepted the prize when they awarded it to him. He is in no way responsible for the fact that the three gentlemen whom he nominated as judges assisted in nominating him as prizeman. This was a mere accident, and one over which he had no control, “either directly or indirectly:” it depended entirely on their unbiassed opinion of the merits of the work published by himself and Mr. Fonblanque in the year 1823. Their competency to decide cannot be questioned, and the retention of the prize is fully justified

* Our classical readers will, we think, agree with us that a figure of *Mercury* would have been more appropriate. Whether the mockery of *Justice* has been since carried out or not, we are not informed. We have not been able to meet with any individual who has seen the Swiney prize goblet.

† We are not disposed to be very critical about words, but we cannot here avoid noticing the sense which an excellent English lexicographer attaches to the word “appropriate.” In defining the meaning of this word Crabb says :—“*Appropriate* respects natural objects. We appropriate the money, goods, or lands of another to ourselves when we enjoy the fruit of them. *Appropriation* is a matter of convenience: it springs from a selfish concern for ourselves, and a total unconcern for others. Appropriations seldom requires an effort: one appropriates that which casually falls into his hands. *Appropriation* is generally an act of injustice. It implies taking from another. A conscientious man will appropriate nothing to himself which he cannot unquestionably claim as his own.”—*Synonymes*, &c. This will enable our readers to judge how far Mr. Syme has mis-described the conduct of Dr. Paris in the Swiney prize affair.

by the fact that there were no other and better works on the subject known to the Committee.

This explanation of a very curious transaction will doubtless prove highly satisfactory to the profession. We much doubt whether the proceedings connected with this award were ever intended to acquire the publicity which they will henceforth enjoy; but we sincerely trust that this publicity may have the good effect of inducing the SOCIETY OF ARTS to keep a watchful eye on the proceedings of those to whom they may hereafter entrust the adjudication of the Swiney prize.

SINCE the above was written, we have received from Dr. Paris copies of the correspondence between himself and Professor Syme. The only letter which is required to complete the series is the following:—

From Dr. Paris to James Syme, Esq.

"Sir,—I have the honour of acknowledging the receipt of your letter in answer to the complaint which I addressed to you on the subject of the injurious statement made in your printed letter to the Lord Advocate. It is a great satisfaction to me that you 'assure me that you shall be happy to use any proper means in your power to give your contradiction to that statement the most extensive publicity.'

"I shall instantly send the letter which I have addressed to you, together with your answer, to the LONDON MEDICAL GAZETTE, for immediate insertion. I did not condescend to notice the statement of an anonymous writer, until it became incautiously adopted by a gentleman of your rank and station in the profession. I will only add that your pamphlet was, for the first time, brought to my notice the day previously to my writing to you.

"I am, sir,

"Your obedient servant,

"J. A. PARIS."

In dismissing this matter for the present, we can assure Dr. Paris that we

shall be happy to give him any space which he may require in our columns, not to answer the charge of having "appropriated" the prize in the sense alleged by Mr. Syme, but simply to explain how it has happened that he received and still retains this testamentary award for an ancient work, on the decision of six gentlemen, three of whom were nominated judges by himself, or under his sanction and authority. To plead anonymous statements as a justification for silence under the ascertained circumstances of this case, is frivolous: it is like setting at defiance professional opinion, which can never be done with impunity. Any statement that we can make, whether anonymous or otherwise, can only have force by the fact that we represent the opinions of a large section of the profession. A *prima facie* case has been made out, and any answer must go to the substantial merits, and not to what lawyers call the "fringe" of the case. We need not recapitulate these: they are fully set forth in the preceding article.

LUMINOUSITY OF ANIMAL BODIES.

DR. SCHNEIDER relates the particulars of two instances in which the hair emitted bright and crackling scintillations. One case was that of a Franciscan monk, who confessed to a too free indulgence in beer, and in whom the phenomenon disappeared on total abstinence. The second instance was seen in a young man coming out of a beer-shop on a very dark night.

Dr. Schneider observes that, of similar cases recorded, the majority were drunkards or subjects of pulmonary disease; also that animals in which luminosity is a normal appearance are of the lowest orders, and a relationship may be observed in the low state of development of their respiratory organs.

The human body contains the elements of luminosity in the carbon and phosphorus which enter into its composition, and which in health are eliminated by the kidneys, lungs, &c. Any circumstances interfering with the due oxygenation of these in the body, but especially of phosphorus, may favour the production of luminosity.—*Casper's Wochenschrift*, 1849.

Reviews.

On the Nature and Treatment of Diseases of the Kidney connected with Albuminous Urine (Morbus Brightii). By G. O. REES, M.D. F.R.S., Fellow of the Royal College of Physicians, and Assistant-Physician to Guy's Hospital, &c. 8vo. pp. 134. London: Longman and Co. 1850.

THE researches which have been of late years made both in this country and on the continent, in reference to diseases of the kidney connected with albuminous urine, have rendered it necessary that we should revise our knowledge, and determine whether any advance has been made in the pathology and treatment of this singular affection. The appearance of a treatise by Dr. G. O. Rees, who is well known to have devoted considerable attention to this subject, is therefore a most welcome addition to our medical literature. By the aid of sound chemical knowledge, accurate observation, and a clear manner of expressing his views, the author has succeeded in compressing into a small octavo a large amount of information which cannot fail to prove valuable to the medical practitioner who has neither the time nor the inclination to read a bulky treatise.

One of the first objects of the author is to place in a clear light the value of that important pathognomonic sign of the disease—namely, the presence of albumen in the urine. Owing to fallacies which none but an experienced chemical pathologist could detect, this principle has often been overlooked when present, or (as first pointed out by Dr. Rees in our pages) it has been mistaken for sugar; and, even when fairly detected, erroneous inferences have been drawn respecting the cause of its presence.

"That the kidneys should be liable to the invasion of disease showing itself in the form of deposit of a character varying not only in relation to the nature of the diseased action, but also according to the constitutional peculiarities of the person attacked, is more than probable; and it is almost certain that such a view would have prevailed immediately on the discoveries of Dr. Bright being made known to the world, had not the matter been confused by the notion that the excretion of albumen in the urine as a constant effect ne-

cessarily indicated a *peculiarity* of lesion as its cause. That more than one cause can produce the same effect is, however, daily brought before our consideration in the practice of medicine, and it requires but little deliberation to perceive that deposits, whether cancerous, strumous, or of adhesive character, must be equally capable of producing analogous, though not identical, physical conditions in the structure of the kidney, of causing albuminous urine by interrupting circulation through the organ, and of obliterating eventually all traces of its normal anatomy. Congestion from causes which bear a more general relation to the circulatory apparatus—such as obstruction to the return of blood through the renal vein, or, on the other hand, a rapid determination of arterial blood to the kidney as the result either of an inflammatory condition or of suppressed cutaneous excretion,—are both causes competent to produce the symptom of albuminous urine; and cases of the latter kind, chiefly owing to their connexion with dropsy after scarlatina, and by their easily admitting of cure, were early distinguished from the graver forms of albuminuria. It has required, however, a more intimate acquaintance with the healthy and morbid anatomy of the kidney, to enable us to trace differences in the character of the morbid deposit by which the kidney becomes eventually infiltrated. The microscope has here been eminently serviceable, and we have now determined with certainty that the deposit which so frequently interrupts the function of the organ varies greatly, and is the result of morbid actions differing materially in character." (p. 6-7.)

A concise description is given of the anatomy of the kidney. This is certainly a necessary section to that numerous class of practitioners who have not been able to keep pace with the progress of minute anatomy. The *Corpora Malpighiana*, which are now introduced with the microscope into almost every drawing-room, are here carefully described and illustrated by a wood-engraving.

Dr. Rees has shown that enlarged mottled kidneys are not always a result of fatty degeneration: in fact, a too implicit confidence in the microscope, which can only examine *surface* and not substance, may lead to great errors in this respect. A kidney which was supposed to have undergone this conversion to fat, and which even appeared fatty to the naked eye, was chemically proved by Dr. Rees to contain less fatty

matter than the organ in health. Dr. Rees very properly recommends the use of pure ether for the purpose of aiding the conclusion to which the microscope may lead an observer. This dissolves the fat: therefore, if after digesting the specimen in ether it disappears entirely, the conclusion regarding its fatty nature will be proved to be correct. It may, however, be partly composed of fat: if examined microscopically before and after digestion in ether, any difference produced by this menstruum will be at once perceptible.

Dr. Rees states that tubercular matter in the abdomen has been found to contain 23·9 or nearly 24 per cent. of fat; and hard scirrhous matter contains ten per cent. We gather from his observations that substances which are really fatty do not always present this character by mere ocular examination; while in other cases, when they have a decidedly fatty appearance, chemistry proves that the effect is not due to fat. The clear inference here, as in other instances, is, that the full benefit on science is only conferred by the microscope when the substance has been submitted to chemical examination before and after it has been placed in the field of view.

We pass over a subject on which there are still some conflicting opinions, in order to give our author's views regarding the conditions under which albumen may be found in the urine irrespective of the existence of that disease of the kidney known as *Morbus Brightii*.

"1. During the last hours of life it would appear that albumen is to be detected in the urine of persons dying from diseases quite unconnected with lesion of the kidneys. When the organism is undergoing the changes preceding the extinction of vital power, there appears a general tendency to permit the passive effusion of the serous parts of the blood into the tissues generally, and especially into the cavities of the body. The tubuli uriniferi suffering in this way (and perhaps even the bladder itself) thus afford a cause for the presence of albumen in the urine when no especial precedent lesion of the kidney has existed. It is not right, therefore, under such conditions, to lay much stress on the detection of albumen in the urine as indicative of nephritic disease.

"2. When any cause of obstruction exists to the passage of the blood through the great system of vessels in any part of its course,—as happens when the heart has

become implicated in severe disease, or when morbid growths or other deposits may press on the inferior cava, and when, owing to the difficulty opposed to the return of blood to the right ventricle, the lower extremity and inferior parts of the trunk become oedematous,—then it is obvious the kidney may become greatly congested: a state which we know is highly favourable to the effusion of serum into the urine.

"It would certainly appear to have happened, though the instances are rare, that under the above condition albumen has been detected in the urine during life, while post-mortem examination has failed to show disease of the kidneys. On the other hand, it must be borne in mind that such general oedema of the lower extremities and other parts, caused by obstruction to the return of blood, may exist in a very prominent degree, and for a length of time, without the urine becoming impregnated with albumen: and on the whole we must regard the kidney as only to be very difficultly affected by the conditions described. It is extraordinary to observe to what an extent this immunity from serous admixture with the urine will pertain when the kidney is suffering merely from congestion, without being further diseased. Therefore, though the above may be an occasional cause for the presence of albumen in the urine independent of lesion of the kidneys, we must regard it as one but rarely met with.

"3. When blood exists in the urine, owing to the accidental rupture of a vessel in the kidney, the existence of a calculus, or any cause productive of hæmaturia, we of course shall find albumen present. It is, however, not to urine containing blood that we are now more especially directing attention; and no conclusion as to the presence of kidney disease is ever to be drawn until we have the opportunity of observing whether the secretion is free from albumen or not after the red particles have ceased to appear.

"4. When pus exists in the urine we must not draw any conclusion from the presence of albumen. The serous part of the pus diffuses itself in the urine, while the corpuscles subside, and this albumen may be detected in solution. It is important to be aware of this, and to wait till the pus may possibly disappear from the urine before examining with a view to the presence of kidney disease. If the pus be from the kidney, however, and not from the bladder, as is sometimes observed in albuminous nephritis, we need scarcely expect the presence of any of the forms of diseased kidney which have been arranged under the generic title of '*Morbus Brightii*.'

"The chief importance of being aware of this source of fallacy is in its connection with those cases of calculus in the bladder in which pus is excreted with the urine. The exact condition of the kidneys, as to their excreting albumen or not, cannot then be satisfactorily ascertained. In such cases, if we can so relieve the symptoms as to do away with the discharge of pus from the lining membrane of the bladder, we may then assure ourselves as to the secretion of albumen or not by the kidney, and so determine an important fact for the surgeon, who must be influenced not only in respect to operating, but more especially in his prognosis, by this important element in the consideration.

"5. The presence of semen is sometimes a cause for the existence of albumen in the urine. This, however, is a rare source of fallacy, and the albumen present is generally but small in quantity. I understand, however, that this fallacy has really deceived an observer into a belief that the patient was the subject of kidney disease. The microscopical examination of this description of urine will, however, at once settle the question by determining the presence of the seminal animalcula in the deposit.

"6. It is necessary here to mention, as part of the history of the subject, that the urine first passed by patients recovering from Asiatic cholera contains albumen." (p. 23-26.)

These facts, therefore, show that albuminuria is not necessarily indicative of Bright's disease of the kidney.

Dyspepsia, a full meal of animal food, and the free exhibition of mercury, have been regarded as causes which would lead to the production of albumen in urine, when there was no disease of the kidney. Our author's experience is decidedly opposed to these views, and so far he aids in removing that confusion which has been unnecessarily introduced into the diagnosis of the disease.

The remarks on the *tests for albumen* in the urine, are sound and practical. Dr. Rees prefers nitric acid, conjoined with the effect of heat. The nitric acid should be added to the urine only when cold. The quantity of acid employed must be rather large in order to ensure permanent precipitation. The compound of nitric acid and albumen is soluble in a large quantity of water: it is only insoluble, and therefore precipitated, when nitric acid predominates. There are two fallacies to which the

nitric acid test is exposed. When a lithate exists in large quantity in the secretion, lithic acid may be separated, and thus be mistaken for albumen. Dr. Rees recommends the employment "of hydrochloric acid, which will precipitate the urine equally as well as the nitric, if the effect be owing to lithic acid: but will produce no reaction if albumen be the cause of the precipitate by nitric acid." (p. 33.)

On this we have to remark, that the hydrochloric acid should be diluted, or acetic acid should be preferred. This latter will precipitate lithic acid, and will not affect albumen. Strong muriatic and sulphuric acids, according to our observations, precipitate albumen, but this precipitate is much more soluble in water than that caused by nitric acid.

The second fallacy is, that urine impregnated with the resinous principles of copaiba or cubebs becomes cloudy on the addition of nitric acid; but this compound is known by its not subsiding like the nitrate of albumen: and ferrocyanide of potassium combined with acetic acid does not precipitate this kind of urine, while it readily precipitates that which is albuminous. Other differences to be observed are, that the odour of cubebs or copaiba is commonly very apparent; and such urine does not coagulate by heat.

As to the effect of *heat*, Dr. Rees very properly suggests that no safe inference can be drawn, except when the urine has naturally an acid reaction, or when it has been artificially acidulated by the addition of acetic acid. Alkalies exert a solvent action on albumen. In acid or alkaline urine, the experimentalist may be deceived by the deposit of phosphate of lime, which, when in excess, is liable to give an opalescence to non-albuminous urine on mere boiling. If the effect be owing to a phosphate, the precipitate is immediately redissolved on adding a drop of nitric acid; hence nitric acid, simultaneously employed, acts as a correcting test.

With respect to the frequent occurrence of this fallacy, Dr. Rees tells us, that out of 482 cases, it happened in seven per cent. that the urine was rendered cloudy by heat, and *not* by nitric acid. These, then, were cases in which the phosphates were in excess, and they might in ordinary practice have given rise to a serious error in diagnosis.

The author states, as indicative of the necessity of employing both tests, that he has even met with two acid specimens of urine which gave no precipitate on boiling, but which yielded a precipitate of albumen on adding nitric acid.

The *pathology* of albuminuria presents many points of interest. The most marked changes take place in the blood, not merely in the proportions, but in the nature of the substances found in that fluid. In the early stages there is no striking alteration in the proportion of red corpuscles or fibrin.

"The most obvious, and probably the most important, morbid change produced in the blood, consists, however, in the loss of its albumen. This causes very important changes in its physical characters, the liquor sanguinis becoming watery,—a condition which leads to a variety of secondary evils to be hereafter noticed. This deficiency of albumen in the blood is sometimes so marked that the serum, when examined, occasionally is found as low in specific gravity as 1018, or even 1015; the standard of health being about 1029 to 1031." (p. 41.)

One of the most remarkable pathological features of the disease, even in its early stages, is that "*urea* can be shown by analysis to exist in the diseased blood, accompanied, in all probability, by other proximate animal elements, natural only to the urine." This can hardly be described as "*retained secretion*," because, in fact, the *urea* has not been formed in the kidneys, the function of these organs being, as the author observes, materially interfered with at the very commencement of the disease. How does it happen that *urea* is found in the blood? Is it there formed at the expense of the substances which the healthy kidney would have carried off from the body? Or are we to suppose that the secretion goes on as usual in the kidney, but instead of being carried off by the ureters is retaken into the blood? Under either view its presence can hardly be ascribed to retained secretion; and the latter is decidedly opposed to the pathological condition of the kidney. The organ is not in a state to secrete *urea* in normal proportion: and there is thus formed in the blood, without the aid of the kidney (?) a principle, for the production of which the kidney in the healthy state appears to be absolutely necessary.

Urea has not only been detected in the blood, but by the author, as well as

by other experimentalists, it has been found in the effusions which have taken place in the various serous cavities of the body.

"As the disease advances we find important changes effected in the blood. The discharge of albumen having continued, the red corpuscles have now decreased in proportion, and the patient has become anemic. The quantity of albumen in the urine has now become less, and the liquor sanguinis more nearly approaches the natural standard. This is shown by the serum sometimes rising in specific gravity even to above its natural weight, while its proportion of albumen is increased. This, however, chiefly happens when albumen no longer appears in the urine,—a condition now and then observed in advanced cases. The fibrin is now occasionally in small excess, but generally, as before stated, does not materially vary from the natural proportion.

"It is of some interest to consider how the gradual changes we observe to occur in the blood are brought about. The drain of albumen by the urine satisfactorily accounts for its absence in the serum, as shown by analysis: but it is not so easy to explain how the corpuscles subsequently become deficient, inasmuch as the disease is not characterised by the discharge of red corpuscles in any quantity, either by the urine or in any other way." (p. 42.)

Dr. Rees suggests an ingenious theory to explain this phenomenon, for which we must refer our readers to his treatise.

As to the state of the *urine*, Dr. Rees remarks, that in the early stages the specific gravity of the liquid is rarely lower than 1017, and the quantity passed is about normal, i. e. from thirty-five to fifty ounces a day. Occasionally it has a red or greenish colour, from the admixture of a small quantity of blood. In advanced stages the specific gravity is greatly decreased, varying from 1014 to 1004, and the quantity voided is considerably increased, as it will be found to range from ninety to one hundred and forty ounces. The specific gravity is, of course, lowered by the great deficiency of solid matters, and would in some instances be much lower than it is observed to be but for the presence of a large quantity of albumen. It may be remarked, however, that albumen is not universally present in the urine in cases of *Morbus Brightii*,—another proof of the impropriety of giving the name of albuminuria to the disease. It is generally found in large proportion in the early stages: in the

advanced cases it occasionally disappears altogether for a period, or is found only in very small quantity. The deficiency of urea is well marked. In a case examined by the author, in which the specific gravity of the urine was 1015, the urea formed only 8·1, in 1000. In healthy urine of 1022 the urea would constitute 30 parts in 1000. The deficiency of urea and salts explains the cause of the low specific gravity of urine in these cases.

"The acute symptoms observed at the commencement of albuminuria, or during its progress, are as follows:—Febrile heat, pain in the head, dry skin, thirst, loss of appetite, urine scanty and albuminous, frequent desire to pass urine, pain in the loins and lower extremities, urine occasionally bloody; nausea is very often felt, and vomiting sometimes occurs. These symptoms may continue for several days without any oedema being observed. It seldom happens, however, that more than six-and-thirty or forty-eight hours pass without decided dropsical swelling attracting attention. As regards oedema, it is worthy of attention that we may frequently have the eyelids and face swelled, without any such condition of the trunk or extremities. This swelling of the face alone is a peculiarity which often serves as a guide to the true nature of the case, when the other general symptoms characteristic of the disease are but imperfectly developed. If the acute symptoms above described are not engrafted on any old disease of the kidneys, and receive timely and proper treatment, the patient may completely recover; the albumen no longer exists in the urine, and the disease may never return." (p. 55.)

This hope is unfortunately not often realised. In the greater number of cases the acute symptoms have become engrafted upon old and insidious disease, and as we have no means of clearly distinguishing these cases from those of a more favourable kind, there is necessarily some difficulty in giving a prognosis.

"Whenever cases of debility, with tendency to nausea, present themselves to your notice, it is well to inquire into the state of the urine; and in such cases, if you also find that the patient complains of frequent desire to pass urine during the night (even though there be no pain in the loins, or anasarca anywhere), you will often find albumen in the urine, and all the symptoms of kidney disease may manifest themselves within no great length of time. There is a symptom occasionally observed in these cases to which I have been more

than once indebted for detecting the real disease. It consists of a swelling of the wrists, and occasionally of the forearm, not anasarca, but combined with induration. There is no redness, but the parts are tender, while the patient suffers pains resembling neuralgia rather than rheumatism. In one case which came under my notice, there being no other symptom present indicative of the kidney disease, I was led to examine the urine from observing this swelling of the wrists, and found it highly coagulable, and the patient the subject of old kidney affection. The pallor of anæmia when seen in men must, however, be regarded as the most common indication, leading to the detection of this disease when more prominent symptoms are wanting. This anæmated appearance, if combined with puffiness of the under eyelid, presents an aspect most significant to the practised eye. It indicates that stage of the disease at which the drain of albumen has begun to inflict further mischief on the circulatory fluid, by interfering with the production of the red corpuscles of the blood." (p. 58.)

The anæmia of chlorosis must not be mistaken for that caused by kidney disease. The author met with an instance in a girl of seventeen years of age, in whom a diseased state of the kidney existed, and whose appearance might have led to the belief that she was labouring under chlorotic anæmia.

Dr. Rees does not admit the correctness of the common opinion, that the comatose symptoms, under which some cases terminate fatally, are due to a poisonous action of the urea circulated in the blood.

"It happened to me, not long ago, to examine the blood of a patient who had his senses about him to the last moment of his life, and whose blood was more impregnated with urea than that of any case of Bright's disease that ever came under my notice. He eventually sunk, and it was found that no kidney existed on one side, and that the large complementary organ had its ureter obstructed by a calculus. Now, here was complete suppression, the blood loaded with urea, and no comatose symptoms. I think it right to mention these difficulties in arriving at an opinion, though I cannot assist the inquirer to the truth: before leaving the subject, however, I would suggest that it may, perhaps, be found hereafter that a certain tenuity of blood must exist in connection with the presence of urea in that fluid, before the conditions above noticed can be brought about." (p. 67.)

We shall pass over the description

of the other symptoms and complications of the disease, in order to consider its treatment.

"As regards the treatment of this disease when it occurs in the acute form, and apparently affects the kidney for the first time, then, even where no complications are present, we may derive benefit from such mild antiphlogistic measures and careful depletion as may tend to relieve the congested state of the kidney. In young persons especially, saline purgatives, the vapour bath, and antimonials, are indicated; while we shall do well (whatever be the condition of the urinary excretion, either as to quantity or quality) to avoid diuretics of every description. The probable state of the kidney must never be lost sight of, and every thing tending to determine to that organ, either in the form of medicines or articles of diet, should be studiously avoided in this early stage." (p. 82.)

"When the chronic form of the disease is to be treated, we have to consider conditions greatly varying from those of the acute stage. The blood is now deficient in red corpuscles, and there is nothing to indicate a tendency to inflammatory disease. In such uncomplicated chronic cases, the object now is to remedy the evil which has been inflicted on the blood by the continued drain of albumen; to restore the red corpuscles, and by thus affecting the circulatory fluid to place the patient in a better position for recovery. The little hope we have a right to entertain of effecting the cure of such cases has already been noticed; but though this may be the case, we still have it in our power greatly to relieve our patients—to lengthen life, and place them in such a position as may give them a right to hope to live for years, and be able, moreover, by great care, to follow any not very arduous vocation without much distress. This advantage is chiefly obtained from the use of iron, exhibited with a view of supplying red corpuscles to the blood, an effect which now we know beyond a doubt is produced by its use in cases of anemia generally. While we are answering this indication we must assist as much as possible in relieving the blood of the excess of water contained in it. This is to be done by the use of hydragogue cathartics, exhibited at intervals, according to the state of the patient. It may so happen that a diarrhoea may set in, requiring all our care to control it; but this is an exception to the rule, and we shall fail in obtaining the proper action of iron if we do not assist its action by the use of hydragogues. For this purpose I know no remedy to equal elaterium." (p. 88-89.)

The best form of iron, in the author's

opinion, is the *mistura ferri composita* of the London Pharmacopoeia.

Dr. Rees carefully points out the danger arising from the use of mercury, even in small doses, owing to the readiness with which it excites profuse salivation in persons affected with diseased kidneys. In one instance which came to our knowledge, death was accelerated by the use of this mineral. The author also directs attention to the fact, that opium should be given with great caution, and under constant watching of the pupils, or a serious aggravation of head symptoms may ensue. If the pupils become contracted, the medicine should be withdrawn.

The Appendix contains some interesting extracts from the Gulstonian lectures delivered by the author: an account of the proportion of urea found in the blood, and the connection of albuminous urine with the puerperal state. Dr. Rees thus describes his method of separating urea from the blood, and estimating its quantity.

"The serum, or effused fluid, is evaporated to dryness, at a heat sustained somewhat below 212° Fahrenheit; the dry mass is broken up, boiling water thrown upon it, and allowed to digest several hours. This liquor being carefully poured off, a second portion of water is added, and allowed to digest; after which, the whole is thrown on a filter, and the solid matters washed with distilled water till the percolating fluid ceases to affect a solution of nitrate of silver. The digested and filtered liquors are next evaporated to dryness, by a gentle heat, and the extract, so obtained, digested in a stopper-bottle, with common ether of the shops, of sp. gr. 0.754. This menstruum extracts the urea only; and by digesting successive portions of it until the last added yields no deposit of that principle on evaporation, we obtain the whole of the urea present, and thus directly estimate its weight. As obtained by this process, urea is quite pure and colourless. It once happened to me to observe some slight contamination of the urea, obtained as above, by fatty matter which had escaped separation with the albumen: this, however, was easily got rid of, by dissolving the urea in distilled water, and throwing the solution on a filter previously moistened, when the fatty matter remained behind, and allowed the urea to pass through perfectly pure." (p. 126-127.)

With this we conclude our notice of this admirable practical treatise. We entertain no doubt that it will find a wide circulation in the profession.

Proceedings of Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Jan. 21, 1850.

DR. LATHAM, PRESIDENT.

MR. WILLIAM ADAMS exhibited a specimen of

Primary Fungus Hematodes of the Lungs.

Both lungs were the seat of the disease, but the right to a greater extent than the left. From the surface of the lung numerous tumors, generally of large size, but varying from half an inch to two inches and a half in diameter, projected, having a regular convex or slightly lobulated form, and of a dark red mottled colour; some, being extended to a greater extent than the rest, had become peduncular; they were all covered by the investing pleura. On section, both lungs presented similar appearances, differing only in extent; the structure, from apex to base, was studded with tumors, varying in size as above stated, of a spherical form, and having a well-defined regular outline; they projected considerably from the cut surface of the lung, in consequence of the collapsing of the intermediate pulmonary structure, which was every where healthy. These tumors were all of a deep blood-red colour, and their structure to the naked eye had very much the appearance of a fine sponge saturated with blood. They were distributed in tolerably equal proportions through all parts of the lung, but the largest tumor was a little below the apex of the right lung, from which it projected anteriorly, and was closely applied to the first intercostal space, and the right half of the sternum, to the osseous structure of which it was connected, the membranous tissues having been absorbed; a small lobe also protruded to a slight extent through the first intercostal space. From the appearance of the parts there could be no doubt of these tissues having been secondarily affected. The bronchial glands generally, and also the cervical glands in the immediate neighbourhood of the subclavian artery on the right side, were also the seat of fungoid growths similar to those in the lungs. Upon microscopical examination these tumors presented the ordinary appearances of cancer growths. The nucleated cells, of which the tissue mainly consisted, were generally of a spherical or oval form; irregular, caudate, and spindle-shaped cells were comparatively rare; the

cells were mostly from $\frac{1}{100}$ th to $\frac{1}{200}$ th of an inch in diameter, and without distinct nuclei, generally having minutely granular contents; cells of still smaller size, and cytoblasts were extremely abundant; there were also numerous large cells, about $\frac{1}{100}$ th of an inch in diameter, generally having minutely granular contents, distinct nuclei and nucleoli not being common.

There was no pleuritic effusion on either side. The lining membrane of the lower part of the trachea and larger bronchial tubes was highly injected, the tubes being filled with very thick, tenacious mucus, of an amber-coloured gelatinous appearance. The larger tubes did not appear to be compressed at any particular part by the enlarged bronchial glands, or the tumors of the lungs; nor did they deviate from their straight course, but during life they probably suffered general compression.

The superior cava was embedded in the fungoid growth, passing between the upper part of the lung and the sternum, and was especially compressed by a small lobe, which produced a convex projection towards its interior.

The only other organ of the body in which cancer was found to exist was the liver, in the substance of which, close to the transverse fissure, were two small masses of fungoid growth, half an inch in diameter, and evidently of very recent date; they had not the form of distinct tumors, and were without definite outline: the structure of the liver in these patches appeared to be infiltrated with fungoid matter, many of the hepatic lobules being still distinct: one of these patches had a pale mottled appearance, from the proportionably large admixture of white medullary fungoid matter; the other more closely resembled the fungus hematodes of the lungs.

Both mammary glands were enlarged, but the right to a much greater extent than the left: it was a circular, flattened, or discoid shape, about an inch and a quarter in diameter, and half an inch in thickness; its surface was uniformly convex, and not lobulated; its structure different in appearance from the female mammary gland, in having less of the opaque white colour, in being somewhat firmer, and in presenting, on section, a minutely-granular appearance, with a slight transparency.

This disease occurred in a man, *æt.* 25, a labourer, admitted into St. Thomas's Hospital on the 8th January, 1850, under Dr. Barker, by whom the following account is given:—Tall and spare, with light hair and pale and delicate complexion. Had had no symptoms referable to the chest till two weeks previously.

Symptoms on admission.—Dyspnoea and slight cough; chest tolerably resonant, and equally so on corresponding parts. Respiration heard every where. Slight rhonchus over whole chest, but very loud both with inspiration and expiration at each side of upper sternum. Heart natural. No change took place in physical signs before death, unless by percussion, which was not tried within a few days of his death. Dyspnoea rapidly increased, and countenance became very anxious, pallid, and at last rather purple. Distress and anxiety ultimately became very great: he could only remain in the upright position, and frequently felt as if on the point of suffocation. There was slight mucous expectoration. A few days previous to his death a small tumor appeared below the right clavicle.

February 4th, 1850.

The osseous tumor presented by Mr. CHAS. HAWKINS for the consideration of the Society, having been examined microscopically and chemically, presented the following conditions:—A basis of calcareous matter, devoid of any bone, cells, or definite structure. Interspersed irregularly through this calcareous matter were numerous fibres, which, upon being examined by reflected light, were observed to be of a yellow colour, and quite opaque. In one or two parts canals were detected: they were partly filled with the peculiar matter of which the fibres were composed. It was also found to consist of much animal matter, and a large quantity of phosphate of lime, having a small quantity of carbonate of lime mixed with it.

Mr. TOYNBEE exhibited a specimen of

Ulceration of Articular Cartilage,

with this history of the case:—A girl, three years old, one of a scrofulous family, slipped down, eleven months ago, and sprained her right knee: this was followed by great pain and tumefaction of the part, and, notwithstanding treatment, the disease progressed, and symptoms of ulceration of the cartilages manifested themselves very rapidly. The parents would not consent to amputation: large quantities of fetid pus were discharged from the joint, and the child ultimately died.

Upon examining the joint after death, in some parts the bone was found denuded of cartilage, and the osseous articular lamella soft, and perforated by numerous foramina communicating with the cavity of the bone. In other parts the cartilage was removed, and its place occupied by a thick vascular and soft membrane, which was continuous with the bloodvessels of the bone; in one portion the soft mem-

brane overlapped the surface of the articular cartilage, to which it adhered rather firmly, and was received into cavities in the articular cartilage, which presented a worm-eaten appearance. A considerable part of the articular cartilage presented the peculiar appearance of portions having been chiselled out, a condition particularly described by the late Mr. Key. That gentleman believed this condition to be produced by vascular fringes of the synovial membrane, which were developed and prolonged from this tissue, where it lines the capsular ligament. In this case, however, no such fringes were observed; and militating against the theory of Mr. Key in this case were the two following facts:—

1st. That some parts of the diseased surface were smooth, and were covered by the proper synovial membrane.

2d. In other parts more deeply chiselled the bloodvessels from the bone projected on their free surface.

The cartilage was undergoing the process of oily degeneration.

Mr. GAY exhibited a

Tumor producing Necrosis and partial absorption of the Malar Bone.

A man, *ætat.* 62, applied to the Royal Free Hospital, having for a long time suffered pain in the region of the left malar bone; and for the last nine months a tumor had gradually shown itself in that situation. Leeches and other remedies were employed without checking its growth. It gave the patient much pain, and the question of operation was considered. The tumor had created a considerable prominence in the upper part of the cheek, and could be indistinctly followed outwards over the malar portion of the zygoma; inwards by a narrow process to the canthus of the eye; and above, as high as the external angular process of the frontal bone; below, its boundary could not be ascertained, as it seemed to be continuous with the masseter muscle. The growth had been slow, and accompanied with much increasing pain: it was quite immovable, and the skin over it healthy, scarcely could be made to slide over it. A week or two before the operation the conjunctiva of the contiguous eye became congested, and the power of vision impaired without any other appearance of disease. It was not quite clear whether the growth was originally from the malar bone, or from the interior of the antrum: the antrum was opened above the molar tooth, but nothing unnatural was detected within it. A crucial incision was made over the tumor, which exposed it in its greatest part. The zygoma was cut through; but on examining the relation of the tumor to the orbit, it was

found that the osseous texture was entirely lost,—that the malar bone had been so removed that a scalpel sufficed to cut across its orbital attachment. The process which extended across to the side of the nose was dissected up, and the greatest portion of the tumor then removed. It was found to obtrude upon the outer portion of the contents of the orbit, and also to have passed into the antrum by an opening through the anterior wall. As much of the outer wall of the orbit as could be taken away was removed, and the growth was also scraped out from the antrum. The removal of the upper maxilla was then discussed, but was not considered necessary. By ocular examination the tumor was concluded to be benign in its character. The wound soon healed. The sight of the eye is lost, and the conjunctiva remains congested, as though pressed out by fluid beneath.

The tumor was found moderately firm: in its cavity there was a piece of dead bone, about an inch long, and half an inch in diameter. It was closely impacted in a cavity, but free from organic connection with the tumor. The masseter muscle was attached to the tumor. On microscopic examination by Dr. Quain and Mr. Gay the growth was found to consist of a fibrous stroma, with large and some irregularly-shaped nucleated and granular cells, leading to more than a suspicion that it was of a malignant character.

In reply to Mr. Crisp's question, Mr. Gay said, that from the microscopic examination of various growths and tissues, he fully concurred in the opinion of Dr. Bennet and others, that the kind of cells which he had described were peculiar to malignant growths; and that they were not found in growths of benign character. He did put some very considerable confidence in the diagnostic marks of those cells; and, whilst his own experience had not been sufficient to warrant him in giving an opinion thereupon, he could only say that it agreed with the opinion which had been put forth by those who had employed the microscope more extensively than himself.

Dr. HUGHES exhibited a specimen of
Abscess of the Kidney, communicating with the Colon.

M. K., aged 26, had borne five children, and had had good health till three months advanced in pregnancy with the fifth child: was then affected with paralysis of both lower extremities. At the period of quickening this was removed as far as the right leg was concerned, but the left remained partially paralysed after her confinement. She had met with no injury or accident

that she could recollect. Admitted into Guy's, Oct. 31st: her general health was good; no indication of diseased spine, and no evidence of diseased kidney, could be discovered, the urine being frequently examined, and found free from albumen: she still dragged the left leg; the uterus was found to be large from congestion, and retroverted: local depletion, the gentle action of mercury, and rest in bed, were recommended and adopted. In two months her progression was much improved, and the uterus considerably diminished, although the mercurial treatment was occasionally suspended. During this favourable progress she was seized with violent vomiting, which caused great depression, with pain in the left loin, tenderness over the pubis, irritation of the bowels, and occasional shivering. These symptoms diminished upon the appearance of a considerable discharge of muco-purulent fluid in the urine. The bladder was examined, and found to be tender. In a few days she had a severe rigor, and there now appeared a rounded tender tumor in the left hypochondrium, in the position of the spleen, but which passed deeply back into the left loin. It was thought to be abscess connected with the left kidney, but as the woman came from an aguish district, it was thought possible that it might be the enlarged and protruded spleen. The urine now became very fetid; was passed in considerable quantity, mixed with a large portion of pus. The bladder was frequently injected with tepid water, which afforded her relief. The water, however, appeared not to distend the bladder, nor did it return by the catheter. It was assumed that there was some communication between the bladder, the cavity of an abscess, and the intestine. The tumor in the left side became more prominent, more tender, and decidedly fluctuating; consequently a question arose whether any advantage could be gained from opening or exploring it. But the health was so undermined that it was thought unjustifiable to attempt any relief by a hazardous operation. She died on Feb. 1st, three months after admission, and one month after the appearance of the symptoms definitely connected with the kidney and other urinary organs.

Examination after death.—The omentum was found well supplied with fat, and the peritoneum generally free from inflammation. Upon carefully raising the upper part of the descending colon, a gush of dirty fetid matter escaped from an abscess proceeding from the upper part of the kidney, which was converted into a dirty iron-grey coloured, almost gangrenous mass. The abscess was bounded by the spleen, the pancreas, the descending colon,

and the cellular membrane of the left flank, and contained about half a pint of pus. It communicated with the descending colon by a round aperture, the size of a pea, and by two smaller openings, and also with the pelvis of the kidney, which, however, was not so greatly distended as is usual in such cases. The bladder was contracted, thickened, and its mucous membrane of a deep red colour, and sprinkled over with irregular adherent masses of fibrine. The ureter was not distended nor inflamed. The right kidney was large, pale, and firm, and its slightly dilated pelvis contained a little thin pus, as did the corresponding ureter. The uterus was rather large, but otherwise healthy.

Dr. BRINTON exhibited a

Very Large Tumor,

with the following history:—A woman, aged 55, received a kick in the belly. Some few days after she was attacked with pain in the right hypochondrium. This shortly ceased, to recur at intervals of several weeks. She had also frequent vomitings, especially after solid food. She rapidly lost appetite, became extremely emaciated, and, finally, died eight months after the commencement of the symptoms.

Latterly a large tumor occupied the upper half of the belly. It was very soft, almost conveying the feeling of fluctuation.

On examination after death, a large and nearly globular tumor was found behind the stomach, and below the liver. It was attached to the areolar tissue around the cæliac axis. The pancreas occupied the lower border, and the left kidney adhered to the lower and left margin.

In order that the members of the Society should see the tumor in its fresh state, there has only been time to examine its structure sufficiently to say, that it is, on the whole, regular in form, little adherent in character, and mainly fatty and fibrous in structure, with very few of the cell forms ordinarily pertaining to malignant disease. But it offers great varieties in many of these respects in different parts; the particulars of which will be laid before the Society at its next meeting.

MR. SOLLY presented two casts taken from a hand after amputation, with this history of the accident.

A man was admitted into St. Thomas's Hospital with extensive injury of the hand; all the fingers were crushed, the thumb remained entire; the skin was torn and stripped off about half way up, on the back of the hand; the edge of the laceration extending transversely from the thumb to the inner side of the hand. The palm of the hand was opened; there had been some

hæmorrhage, but it was not bleeding much when he was admitted.

The hand had been drawn in and crushed between two cogged wheels of a printing machine, the extremities of two fingers being torn off and retained in the machinery.

From the severity of the injury it was very evident that amputation of some kind was necessary; the only point to decide was, whether it was possible to save any portion of the hand, or whether the whole should be removed at the wrist joint. Finding the metacarpal bone supporting the little finger entire, and the whole of the thumb, it was determined to save them: an incision was made posteriorly along the edge of the lacerated wound: anteriorly more skin could be preserved, and from the palm of the hand the flap was made. The three larger metacarpal bones, very near to their heads, were then sawn through, leaving that of the little finger entire. No bad symptoms occurred. The flaps did not unite by the first intention, and the wound was some time in healing, but it ultimately did so in a sound healthy manner.

When he first left the hospital, which was about two months from the time of his admission, he had little or no power of moving the stump formed by the metacarpal bone of the little finger, and he could hardly believe that he could ever gain any power over it, but now (March 1846, about nine months since the operation) he has the power of approximating it to the thumb, and holding a hand so firmly, that it is very difficult to break the connection. Since this time he has resumed his occupation as pressman, and does his work as well as ever. There is a cast of the hand in the museum of St. Thomas's Hospital.

MR. PRESOOTT HEWETT brought forward

Two Kidneys affected with Sub-acute Inflammation,

which he thought presented some points of interest in relation to surgery.

Both these organs, somewhat larger than natural, were found to be more than usually adherent to the cellulæo-adipose tissue which surrounded them; their capsules were easily peeled off, leaving a perfectly smooth surface; their cortical structure was coarse, and congested throughout. Examined microscopically, most of the tubuli were crammed with cells and granular matter; some, however, were entirely denuded of their epithelial lining, the basement membrane being very little oily matter. These kidneys at 53, who street some s

a compound comminuted fracture of the leg at about the middle third. The general health being good, and there being no contra-indication in the state of the leg, it was determined that an attempt should be made to save the limb. Everything appeared to be going on most favourably until the third day, when she began to complain of a sensation of cold in the toes; the discolouration about the ankle and lower part of the leg was somewhat more marked, not more, however, than could be attributed to the appearances of a common bruise; the whole limb was as warm as the other, and she was otherwise quite comfortable, the pulse being of good strength and not over frequent. On the fourth morning the medical attendants were summoned at an early hour, in consequence of the leg having, during the night, assumed a dark colour, which appearance proved to be dependent upon mortification extending as high up as the knee. The patient remained perfectly sensible, but the countenance was anxious and depressed; the pulse was feeble, and the tongue moist.

As no apparent disease existed either about the heart or main vessels of the limb, amputation of the thigh was performed in the hope of saving life. The appearances of the venous parts of the stump were satisfactory, and she bore the operation better than was expected.

Dissection of the limb showed that no injury had been done either to the large vessels or nerves; the former were pervious in their whole length, and their coats were quite healthy: the tibia was broken into several pieces, but the soft parts were not much lacerated.

Having in vain sought, both in the state of the limb and in that of the general circulation, for the cause of the untoward symptoms which had supervened so rapidly, Mr. Hewett was induced to look to the urine, which, when examined by Dr. Bence Jones and himself, was found to be only slightly albuminous by heat and by acid; but, with the microscope, several fibrinous casts were detected in it. This discovery at once led to an unfavourable prognosis, which was confirmed by the subsequent progress of the case.

Shortly after the operation the patient began to rally, and continued to improve for the first 48 hours, when it was observed that the stump, which until then had presented a good appearance, was beginning to slough at one of its angles; she was restless; the pulse had become weaker, and the tongue was dry and brown. Towards the evening she had a slight rigor, which was followed by profuse perspiration during the night. These symptoms went on increasing, and she died on the following

evening. Mr. Hewett remarked that he could not help connecting the mortification which had occurred in this case with the state of the kidneys which was subsequently discovered. Wounds inflicted either by accident or by the knife of the surgeon were not unfrequently, in such cases, followed by secondary abscesses or extensive mortification in various parts. Several cases of this kind had already fallen under his own notice, and some of the most eminent surgeons of the present day avoided if possible all operations, even the most trivial, on persons in whom disease of the kidneys was known to exist.

DR. BENGE JONES exhibited the

Knee-joint and Two Masses of Fibrin.

one from each knee-joint, of a woman, æt. 21, who died about the seventeenth day, of acute rheumatism, in St. George's Hospital. A., a maid-of-all-work, stout, red faced, healthy looking. Had slight rheumatism one year ago. First complained of pain and swelling in the joints a week since. On admission all the joints were affected with pain, but there was very little swelling. She also complained of great pain in the chest, and there was a soft murmur with the first sound at the base of the heart towards the left clavicle.

She continued improving until Feb. 2d. She then complained of no pain in the limbs. The hands were observed to be very tremulous, and the manner to be more hurried than it had been. The face was more flushed. She was reported to have passed a restless night, and to have had some delirium. She denied being accustomed to drink, but admitted that she occasionally took gin. An attack of delirium tremens was anticipated. Twenty drops of laudanum were ordered to be taken at bed-time, and to be repeated if she became more restless. During the evening she was exceedingly restless, but after taking the first night draught she dozed from 8 to 10, wandering as she had done the night previously. At ten nothing peculiar was observed in her symptoms by the apothecary. At twelve she was very restless, wanting to get out of bed, and the night nurse gave her the second night draught. At one o'clock she was violent, and had to be held in bed by a nurse from another ward, whilst the night nurse went for the apothecary. At three she became quieter, apparently from exhaustion, and she gradually became comatose, with small contracted pupils. Bleeding produced no change in her symptoms, and she died at a quarter to six A.M.

Four night draughts had been sent up on the 2d of February for this patient: rather more than two remained in the bottle. From the examination of these, it

appears that not so many as forty drops of laudanum were taken.

Examined twenty-nine hours and three quarters after death.—Body fat and well made. The brain and its membranes were rather dryer than natural, but otherwise presented nothing remarkable. No excessive congestion was found, and no effusion of blood or water.

A few old adhesions existed on the right side of the chest, and both pleural cavities contained a small quantity of serum. The lungs were not excessively congested, and otherwise healthy.

About two ounces of serum in the cavity of the pericardium; the very slightest roughness of the surface of one auricle was observed, but otherwise there was no evidence of inflammation of the pericardium; the valves of the heart were perfectly healthy. There was no trace of any deposit of fibrin on the pulmonary or aortic semilunar valves. The right cavities contained fibrinous coagula; the left ventricle was firmly contracted.

There was a small quantity of turbid serum in the cavity of the peritoneum. The liver and pancreas were healthy. The spleen soft and flabby; kidneys slightly congested, especially the right, but perfectly healthy in appearance.

Each knee-joint contained rather more than a drachm of turbid glutinous serum, which was alkaline, highly albuminous, containing many oil globules. Many cells the size of pus globules, having well-marked nuclei of a specific gravity greater than the albuminous liquid. Some cells were also seen three times as large as these, containing granular matter and nuclei.

In the upper part of the cavity of each joint, a thickish mass of fibrin, an inch and half broad, and about the same length, was lying. One of these masses of fibrin was deeply stained with red blood, but no vessels could be traced in it. On removing these substances the synovial membrane at the upper part of each joint was seen to be intensely red and highly vascular, and to present the most striking contrast with the white shining cartilage in which no vessels could be traced, and which was not altered in appearance.

One elbow-joint was opened, and it contained a clear glutinous synovial fluid, apparently without any cells in it.

MR. CRITCHETT exhibited a specimen of *Calloid Cancer of the Mammary*,

which weighed about 2 lbs., and had been removed by him about a fortnight ago, from a lady 42 years of age: it was quite moveable and unattached to the pectoral muscle, and the surrounding parts were not affected. The wound is now very nearly

healed. About five months ago she first noticed a small lump, about the size of a filbert, at the upper and outer part of the breast, being led to notice it from feeling lancinating pains through the gland; the tumor increased rapidly, and in about a month had attained the size of a small orange; it continued to increase until it reached the size of the specimen now exhibited. The tumor before its removal gave to the touch a peculiar elastic feel, was small and lobulated, and quite moveable. A section presented a white smooth semi-transparent surface; it was distinctly circumscribed, and contained in a cyst, which not only surrounded it, but dipped in and divided it into lobules.

Examined under the microscope, both by Dr. Parker and Mr. Toynbee, it seemed to be made up of small round transparent masses, firmly connected together by a denser substance of a fibrous character. These masses contained cells of an oval form, containing nuclei and some viscid fluid; the cells were not numerous in comparison to the fibrous substance.

This case is remarkable from the extreme rapidity with which it grew, and also from the rarity of this form of cancer in the mammary gland; it may be worth observing that this patient's father died of malignant disease of the rectum.

DR. OGIER WARD exhibited

Two Fibrous Tumors connected with the Uterus,

one about the size of a chestnut, springing from the back part of the cervix, the other contained in the cavity of the uterus, which was enlarged by its growth to the size it attains at the fourth month of pregnancy. The smaller one was of an homogeneous structure. The larger was readily detached, except in one or two places where it was adherent by fibrous bands. It was invested with a vascular tunic. It consisted of lobuli of fibrous matter bound together by cellular tissue. Exterior to the tunic, and in the loose tissue that surrounded the tumor, and also in that lining the cyst, were numerous granules of fibrous substance. The whole uterine tumor had an oval shape. The parietes of the uterus were thicker along the left side than on the right. The cavity of the uterus was found to have been opened, and that the tumor was really without it. Neither fallopian tube could be traced into the cavity. A small vascular cyst, half an inch in length, was attached to it at the back part.

The microscopic structure of the tumors was a fibrous tissue enveloping nucleated cells about the size, and a little more spherical, than blood globules. Similar fibrous deposits existed in the right ovary; and

some cysts, containing nucleated cells and oil globules, floating in a clear fluid, were found in the tissue connecting the fallopian tube to the ovary. The tumors were taken from an old woman who died of phthisis, but had never complained of them.

Dr. Ogier Ward also exhibited a microscopic specimen of bony matter taken from a fibrous tumor, identical in structure to the osseous tumor exhibited at the last meeting.

MR. PARTRIDGE communicated a preparation which showed a wasting of the second and fifth pairs of cerebral nerves on the left side; it was taken from a man about 40 years of age, who had been under Dr. Todd's care, off and on, during a period of 10 or 12 years.

The patient's first malady was a fit, which produced hemiplegia, and also the loss of sensation on the left side of the face. The hemiplegia gradually disappeared, but the facial palsy remained till death. It affected both roots of the fifth nerve, producing entire loss of sensation on the left side of the face, as far as the median line, and loss of motion in the muscles of mastication on the same side; the wasting of these muscles, and especially of the masseter, gave a curious appearance of *flatness* to the side of the jaw. There did not exist any palsy of the portio dura, and hence the face was not drawn to one side.

After the palsy of the fifth nerve had endured some time, the left eye became inflamed, suppurated, and shrunk in its orbit; but the nodule which represented the collapsed eye-ball still moved freely under the influence of its muscles. This state of things continued for some years, during which the man had hemicranial pains, which, from the history of their origin, Dr. Todd was disposed to attribute to syphilis.

On a post-mortem examination the arachnoid at the base of the brain was thickened, and its cavity was obliterated, opposite the left temporal bone, where it adhered forcibly to a much thickened portion of dura mater that involved the trunk of the fifth nerve on the proximal side of the Gasserian ganglion. The nerve itself was wasted, was of a pale grey colour, and when examined under the microscope was found to contain only a few imperfect nerve-tubules, and a quantity of fine membranous tissue.

The tuber annulare, and the medulla oblongata on the left side, appeared somewhat flattened and rather smaller than on the opposite side.

The left optic nerve, from the commissure forward to the ocular tubercle, was much wasted in size, and presented the same grey colour as the fifth nerve: like that nerve,

when submitted to the microscope it presented only a few traces of nerve-tubules amidst a quantity of membranous tissue. The right optic tract was of its natural colour, but appeared much flattened, and measured in breadth one-third less than the tract of the opposite side. The right corpora geniculata, and especially the outer one, were less prominent and smaller than those on the left side.

The tubercula quadrigemina, and the optic thalami on both sides, were quite healthy and of their ordinary dimensions. No effusion or abnormal cavity could be discovered in any part of the brain.

The muscles of the orbit and of the shrunken eye-ball were of their usual size, and corresponding with this condition of these muscles, their nerves (including the third) were of the ordinary dimensions, and had their natural appearance.

The facts of this case, taken in their probable sequence and bearings, appear to be as follows:—Syphilitic inflammation and thickening of the membranes of the brain along the transit of the fifth nerve on the left side, and a consequent pressure on and palsy of that nerve, producing loss of sensation in the left side of the face, and loss of motion in the muscles of mastication on the same side; subsequently, and in consequence of the palsy of the fifth nerve, inflammation, suppuration, and shrinking of the eye-ball, and (dependent upon the loss of vision) the wasting and degeneration of the optic nerve on the left side, with a corresponding diminution in the decussating fibres of the *opposite* optic tract, and of their origin in the corpora geniculata. It will be observed that neither the optic thalami nor the corpora quadrigemina had undergone apparent change. The free movement of the orbicular muscles accounted for the sound condition of their nerves.

MEDICAL SOCIETY OF LONDON.

Monday, Jan. 21, 1850.

MR. HANCOCK, PRESIDENT.

The Occurrence of Variola during the Development of Vaccinia. By MR. W. F. BARLOW.

VACCINIA and variola were not rarely seen together when vaccination had been performed during the latent period of small-pox. In such a case Mr. Barlow had observed the vaccine vesicle progress in a perfectly normal manner, until the appearance of the small-pox, which then pursued its course, being either slightly or considerably modified, or not influenced in the

least. The vaccinia was sometimes arrested by the variola; on the appearance of the latter the former would become stationary, —would wait, as it were, until the small-pox matured, and then undergo the process of suppuration and scabbing simultaneously with that affection. Variola would make its appearance so late as ten days or more after the successful insertion of vaccine lymph; and therefore the practitioner should be very cautious in giving an opinion as to the preventive influence of vaccinia where exposure to variola had occurred. Some cases were related to show the time at which variola might appear during the development of vaccinia, and the influence which seemed to be mutually exerted by those affections, or, as he believed, modifications of one affection. It did not always happen, in the cases under consideration, that the vaccinia had a favourable influence, but, in other instances, the variola was most decidedly modified. Various conclusions had been come to as to the effect of cow-pox on small-pox, where the latter was latent when the former was introduced into the system, but those differences had resulted from the unlike cases which had come under the notice of distinct observers. According to Mr. Darlow, whatever doubt there might be as to the utility of vaccinating after small-pox had appeared, there could be none whatever as to the good of doing so in cases where persons had been exposed to its contagion, and in whom it might be latent; for many observations, besides those which he had made himself, went to show that vaccinia would, even where the appearance of variola was not to be prevented by it, most materially diminish the severity, cut short the course, and lessen the danger of the disease. Besides, where people had been exposed to variola, and where they continued to be exposed from day to day, there was no choice left; for exposure was, as he need hardly say, no proof whatever of the system being infected. Where numbers were exposed to it together, some caught the disease early, some resisted longer, some would even escape entirely. By concluding that persons were infected when they were not, no end of evils might arise; and it was the duty of the practitioner to vaccinate in all cases previously to the appearance of the small-pox; and, if he could not always prevent that disease by this proceeding, he might have, notwithstanding, the satisfaction of perceiving that he had been the instrument of its obvious mitigation.

LIVERPOOL MEDICAL AND PATHOLOGICAL SOCIETY.

Jan. 24th, 1850.

[We are requested by the Secretary to state, that owing to an accidental omission in his report, the title and authorship of the last case in the last report (page 252) were not published. It was a case of *Fatal Synovitis after Scarlatina*, by Mr. ATCHERLEY.]

Necrosis of the entire circumference of the Fibula and Humerus.

MR. HIGGINSON brought for exhibition two specimens of necrosis, in which portions of the whole circumference of the shaft of the long bones were thrown off, the continuity between the upper and lower portions of the bone being perfectly preserved during the process.

One specimen was a portion of fibula, nearly six inches long, from a boy about eight years of age, thrown off after phlegmonous erysipelas: it required only to be drawn out by the forceps. In the same child the proximal phalanx of the middle finger became dead from the same cause, and protruded in a blackened state through the skin. In this state it was seized by a cat one day, when the child was sleeping, and carried off amid loud cries from the patient.

The other specimen was two and a half inches long, from the middle of the humerus of a young man, about eighteen, who had fracture many months previously on shipboard: union had taken place, but a sinus led to the denuded portion, which was loose, and was removed by enlarging the wound. It bears the marks of an attempt to remove it by trephine and chisel, made by a surgeon, but which the patient could not bear.

Calcareous Bodies discharged from an Abscess in the Neck.

A lady, *æt.* 25, had a hard tumor under the middle of the sterno-cl. mastoid, which softened and pointed in the same place where a suppurating gland had been opened twelve years before: the pus was extremely white, and for some weeks afterwards hard chalky masses were discharged from the sac, soluble in dilute muriatic acid. The largest fragment weighed six grains, but probably five times that amount came away.

Thoracic Aneurism rupturing into the Oesophagus. DR. CAMERON.

A sailor, who was a hard drinker, aged 40 years, worked his passage home and had

good health until within three weeks of his death, when he began to complain of simple dyspeptic symptoms. On the 9th December he vomited a pint of blood, and again on the 10th. On the 12th he died suddenly. He never had rheumatism, cough, or difficulty of breathing, or any symptom of thoracic disease; and there were no abnormal sounds whilst in the recumbent posture, the only one in which he was examined, owing to the violence of the previous vomiting of blood. His only symptoms were those of stomachic disorder.

Post-mortem.—A large aneurism, of the size of a hen's egg, was found at the junction of the thoracic and the arch of the aortic artery. The sac was formed partly by the coats of the artery, and partly by the surrounding structures. There was an opening in the upper part of the sac, of small size, and valvular in its form, owing to the direction it took through the structures separating the artery from the œsophagus, into which it opened: this probably accounted for the two attacks of vomiting, and the long interval of three days between the rupture of the aneurism and death; the blood escaping slowly, and probably sometimes not at all, into the stomach through the œsophagus, and remaining there until too large in quantity to be retained, when the vomiting took place. There was dilatation of the left ventricle, with thinning of its parietes. Valves of both sides perfectly healthy. As much of the aorta as was examined was most extensively studded with atheromatous deposits, varying in consistence from that of soft cheese to that of cartilage. The *arteria innominata*, left carotid, and subclavian, were similarly diseased at their origin (not traced any further). Kidneys presented well-marked specimens of Bright's disease. A small quantity of urine found in the bladder was loaded with albumen, but the quantity was too small too ascertain its specific gravity.

Dr. Cameron remarked upon the co-existence of the diseased state of the arteries and of the kidneys in this case, and expressed his belief that they were more intimately related, in the way of cause and effect, than simply of co-existence.

Dr. WHITTLE remarked upon the occurrence of thoracic aneurism, with symptoms of dyspepsia alone. A man came to him with a mere stomach complaint, as he supposed, but he discovered a large thoracic aneurism, and the man died suddenly a few days after.

Sir A. KNIGHT said a soldier, who had never complained of the slightest ill health, died suddenly, whilst setting down a glass of liquor. He had an aortic aneurism.

Mr. HIGGINSON said a man had copious

spitting of blood, with very little or no previous illness, and died. He was found to have aortic aneurism, and the stomach was full of coagulated blood, like black puddings. He once saw a man die from the bursting of an aneurism into the left bronchus. He was laid down, when he suddenly started forward into an erect position in bed: the floor was deluged with blood, and he died instantly.

Dr. TURNBULL inquired how long cases of dilatation of the thoracic aorta had been actually observed to continue. He thought they progressed less quickly in old than in young persons.

Dr. LANCASTER mentioned one case which was apparently very rapid. A robust young woman, 22 years old, was dancing, and died. In the upper part of the descending aorta was a slit, as if from a knife; the coats of the artery were thinner than usual, but the outer coat was not distended, and therefore the disease was probably recent, and had not had time to dilate the artery.

Dr. NEVINS said a man, above 40 years old, complained, twelve months since, of continual pain at the junction of the neck and shoulder, extending up to the head, with an anomalous puffiness about the root of the neck, for which no satisfactory cause could be discovered at the time, as there was no symptom of aneurism then: within the last few weeks a distinct aneurismal bruit indicated the existence of that disease in the *arteria innominata*, and the early symptoms might perhaps be the first indications of the disease.

Mr. BALMAN thought the frequent absorption of bone, as the sternum or vertebra, a sufficient proof of the slow progress of the disease.

Malignant Disease of the Cardiac Orifice of the Stomach. Dr. BURGESS.

John M'Gee, a baker, aged 61 years: ill two years, was greatly emaciated, and had the aspect of a person labouring under malignant disease; had no difficulty in swallowing, but always vomited immediately afterwards. He continued at his work (except for a few days occasionally) until ten days before his death. There was no tumor perceptible externally.*

Dr. SANDIE had found the citrate of quinine and iron useful in allaying the vomiting in a case of scirrhus of the pylorus. No other member of the Society had tried the remedy in such a case.

* The œsophagus was healthy. The cardiac orifice of the stomach was extensively ulcerated and thickened, and of scirrhus hardness. Rokitanaky says "the cardiac orifice of the stomach is rarely the seat of cancerous degeneration: when it occurs it invariably involves a portion of the œsophagus."

ACADEMY OF MEDICINE, PARIS.

Jan. 29, 1880.

PRESIDENT, M. REICHETRAU.

Contagion of Cholera.

M. PELLARIN communicated the particulars of a case in which cholera had been transmitted by the clothes and bedding of a patient.

Reduction of Dislocation of the Fingers by the aid of Collodion.

M. MASIER related a mode which he had adopted for the reduction of these luxations, by the employment of strings moistened with collodion. By this means M. Masier had been enabled to produce extension in a dislocation of thirteen days' standing.

Cæsarean Operation.

A third case of this operation was recorded by M. TUEFFERT, Jun.

Enlargement of the Uterus.

M. VELPEAU replied to the observations of M. Huguier and others, and repeated his opinion that *engorgement* is not a distinct malady, but merely a result of disease or malposition of the uterus. X

SURGICAL SOCIETY OF PARIS.

Jan. 24, 1880.

PRESIDENT, M. DEGUISE, père.

On the diagnosis and treatment of complicated hydrocele.

M. LARREY read a report on an essay by M. Chaumette, in which that surgeon states that the introduction of the acupuncture needle is preferable to the use of the ordinary exploring needle. M. Chaumette has found the injection of iodine more successful than of any other substance. The complications mentioned by M. Chaumette were tubercle, and cartilaginous degeneration of the tunica vaginalis.

Tumor of the right parotid gland.—M. Chassaignac presented the object of the following case, and requested the opinions of members on its treatment.

A man, thirty years of age, of good constitution, exhibited a tumor of the right parotid gland, which had the property of increasing or decreasing in size with the changes of position of the head or body. When the head is turned to the right the size of the tumor diminishes; it is also less in the upright than in the recumbent posture. It is but slightly prominent, soft to the touch, and painless. The integuments are unaltered. The finger introduced within the mouth, and the other hand externally, embrace the moveable tumor, and give the idea of a reticular texture. At the root of the ear is a small hard nodule, and the skin

over it is of rather a dark colour. No vascular sounds are audible. The tumor has been noticed by the patient about six years.

Some members advised acupuncture, some recommended galvanism, and some cauterization, and some, and especially M. Michon, advised that the tumor should not be interfered with in its present condition.

On the condition of the muscles of the leg in club-foot.—M. Demarquay had had several opportunities of examining the muscles of the leg in these cases, and had generally found them unaltered; but that in one or two instances he had found fatty degeneration to have taken place. M. Demarquay considered that the latter, and not fibrous alteration, was the change to which the muscles under these circumstances are liable.

The discussion on this subject was adjourned. X

ACADEMY OF SCIENCES, PARIS.

Jan. 24, 1880.

PRESIDENT, M. DUFREY.

Hemometers.

M. GUETTET related a series of comparative trials with the hemometers of M. M. Poiseuille and Magendie, which went to show the greater degree of accuracy yielded by observations made with the latter than with the former. The superiority of Magendie's hemometer over the instrument of M. Poiseuille was stated by M. Guettet to be as great as that which M. Poissinelle's possessed over that of Hales. X

MESMERISM AND INSANITY.

We once heard a distinguished physician, who was giving evidence before a commission in lunacy, admit, in answer to a question from a clever barrister, that a man was under a delusion who believed in clairvoyance, and who thought it possible for a person in a mesmeric state of exaltation to see through a five inch deal board. We consider that the physician in question did not draw a scientific distinction between what may be considered false conclusions, or notions of belief consequent upon a healthy—it may be an ill-educated and illogically constituted mind—and those *creations of the intellect* the effect of a diseased or disordered condition of the nervous apparatus, through which the faculties of the understanding are manifested. A man may entertain most absurd and preposterous notions, and yet be pathologically and legally sane. The fact of his *belief* in these ideas is no evidence of derangement of mind, or of the existence of lunacy.—*Journal of Psychological Medicine.*

Hospital and Infirmary Reports.

KING'S COLLEGE HOSPITAL.

Gun-shot wound of the arm—Compound comminuted fracture of the humerus—Gangrene occurring in the leg several days after—Death.

THOMAS K—, *etat.* 21, a strong and healthy farmer, was admitted into the London Ward, under the care of Mr. Fergusson, on Sunday, January 13th. Whilst out shooting the day before, some miles from town, the contents of his gun, which consisted of No. 4 shot, were discharged into the left arm. Surgical assistance was immediately obtained, and the wound was attended to. About ten hours after the accident Mr. Fergusson first saw him, and found a wound, about the size of a crown piece, on the inner side of the arm, about one-third distance from the shoulder-joint, and just external to the belly of the biceps muscle. The finger could be inserted through this, and directed upwards and outwards as far as it could reach. The bleeding, which had been severe at the time of the accident, had ceased, and several shots had been extracted. There was pulsation at the wrist, indicating that no injury had been done to the brachial artery. The bone was broken into several pieces, which were lying loose, and one fragment was extracted. Mr. Fergusson considered it proper to make an attempt to save the patient's arm, and had him removed to King's College Hospital, where he was admitted on the following day. On admission, the arm was considerably swollen, from the shoulder downwards: there was but little constitutional disturbance: simple warm water dressing was used, and the arm placed in a convenient posture.

January 14th.—The patient has passed a comfortable night, and does not suffer much pain; the wound itself is not looking unhealthy, but the whole upper arm is very much swollen, and there is great tension all around. Mr. Fergusson made a free incision on the outer side, below the shoulder-joint, where the tension was greatest, and removed some shot and bits of bone: warm water dressing was continued, and the patient was ordered broth and arrowroot.

15th.—The arm is much less swollen and tense, and the patient is altogether in a pretty comfortable condition; tongue is clean; pulse 120, somewhat irritable; countenance free from anxiety: the wound is looking healthy, and is granulating.—Continue.

16th.—Has passed a comfortable night,

but he has vomited once or twice this morning; and he is not able to keep any thing on his stomach beyond some brandy and sago; the arm is more swollen to-day and there is an inflammatory redness in the neighbourhood of the wound; the tissues are much infiltrated with serum and pus; the wound of the entrance of the shot looks pretty well, but that made by Mr. Fergusson is in a sloughing condition; the fore-arm is free from swelling, and the radial artery beats freely, 110 in the minute; the tongue is still clean, and the countenance free from anxiety.—Continue.

17th.—Doing well; there is much less swelling to-day about the shoulder, and the patient suffers no pain; there is, however, a diffused redness extending over the upper arm, which looks like erysipelas; the slough has separated from the wound made by the knife, and the original wound is granulating; tongue clean; pulse 100, firmer; countenance good. To continue the water dressing, and to have broth, brandy, and sago, and some fish.

18th.—This patient is not so well to-day; he did not pass so good a night; he has vomited also after taking his dinner; his countenance is somewhat anxious; pulse above 120, feeble. On looking at the arm it is found more swollen, and the diffused redness has put on the decided character of erysipelas: the parts are a good deal infiltrated, unhealthy serum, mixed with some sloughing tissue, coming away in the discharge; the granulations of the wound are large and flabby. To take effervescing mixture, and continue other measures.

19th.—A great increase in the swelling of the arm, and some of the skin is sloughing; and there is a boggy sensation in the parts; there is also a considerable discharge of unhealthy matter from the wound; pulse above 120, feeble, and irritable; vomiting has not recurred; tongue slightly furred; bowels confined; erysipelas is somewhat extending. Mr. Fergusson made three deep incisions in the most swollen and sloughy parts, which let out a quantity of serum and pus; to continue warm water dressing, the same diet, and to have an injection.

20th.—The incisions made yesterday have given great relief to the parts, they being much less swollen; the patient passed a comfortable night, and his countenance is more cheerful, but he is weaker; pulse 124; tongue slightly furred; bowels open; no vomiting. Continue.

21st.—Much lower to-day; an indifferent night was passed; countenance anxious, and hiccup has appeared; pulse 140, very feeble. The arm much in the same condition, but erysipelas is extending, and the sloughing is going on. To have a poultice.

tice applied to the parts, and to take 3ss. of chloric ether every four hours, with an additional quantity of brandy.

The hiccup which had distressed him so much ceased during the day, but occurred again in the evening; and a new symptom has occurred. He complains of pain and coldness in the left leg, and on looking at it, it is found somewhat swollen; some flannel was wrapped around it, and he was ordered half an ounce of brandy every two hours.

22d.—Is getting lower; hiccuping still goes on, and the countenance looks very ill; the pain in the leg has been very intense, and on Mr. Fergusson's visit he found it swollen, and its temperature much lowered, and it is too evident that mortification has set in there; the arm itself is not so much swollen, but the parts are in a very sloughy condition; the pulse is very rapid and feeble; the tongue is very red. Continue his remedies. From this time the patient became rapidly weaker, most intense hiccup constantly occurring; and the powers of life gave way on the next morning, the 23d.

The body was examined on the following day.—The humerus was shattered into a great many pieces, but the shoulder-joint was not implicated, although there was some pus in it; the brachial artery and the large nerves were not injured; the soft parts were in a very sloughy condition. On examination of the leg, the soft parts were found to be in a well-marked gangrenous condition as far as the knee. There were no purulent deposits in the various viscera of the body, or in the brain.

In a clinical lecture, Mr. Fergusson remarked that this case presented features of great interest and importance. Here was a compound fracture of the humerus from a gun-shot wound, and the accident was of so grave a nature that when he first saw the case, it was a question as to whether amputation should not be immediately performed. But notwithstanding the shattered condition of the bone, there were several circumstances which induced him to attempt the salvation of the patient's arm, rather than resort to the serious operation of amputation at the shoulder-joint. The young man was of good constitution and in excellent health; the important parts in the neighbourhood of the wound were uninjured; at least there was every reason to believe that neither the humeral artery nor the large nerves were touched, and the lower part of the arm was uninjured: moreover, he had no reason to suppose that the fracture had gone into the humero-scapular articulation. Taking all these things into consideration he deemed it his duty to attempt to save the arm. But as they had seen, the patient had died, and it became a nice question as to whether he would have been saved if the

injured member had been at first removed. Some might say that here was an instance where an opposite mode of treatment to that which had been put in force would have saved the patient, or that he would have had a much greater chance of his life if the injured limb had been removed, and the healthy incised wound of amputation had been substituted for the unhealthy one caused by the accident; but this is merely a conjecture: the shock of removal of the arm at the shoulder-joint is very severe. It is an operation of by no means frequent occurrence, and several of the cases have terminated fatally. By making the attempt to save the arm, he was not precluded from performing secondary amputation, if during the progress of the case it would be found necessary to save the patient's life. There is also a great difference of opinion as to whether primary or secondary amputation is the best in gun-shot wounds: in military practice the former is the most successful, but in civil practice the statistics of primary operations are not so favourable. It might be contended that the present case was a striking argument in favour of primary amputation, but supposing it had been performed, his recovery is merely conjectural; all know how uncertain is the result of an operation of great magnitude.

They all saw that for the first few days the case was doing as well as could be expected, but unfortunately an attack of phlegmonous erysipelas came on in the arm and tended to the fatal result. But an interesting and striking occurrence took place shortly before his death: they had noticed the very severe hiccup under which the patient suffered latterly; this symptom indicated something very serious, and this soon showed itself in the form of gangrene, attacking one of the lower extremities which had not been injured, and which was at a distance from the original wound. This was a somewhat unusual occurrence, but he had seen instances of a somewhat similar condition, in which gangrene had attacked a part of the body, at a distance from the injury after an operation. One case in particular he called attention to. It was mentioned in his *Practical Surgery*. A man received a compound fracture of the leg, for which the surgeon amputated. Mortification, however, appeared in the stump, and amputation was again performed through the thigh. Soon after this mortification appeared again not only in the stump, but it showed itself over the scapula, at a distance from the injury, and the patient soon died.

Lithotomy—Amputation at Ankle-joint.

On Saturday, Feb. 9th, Mr. Fergusson performed two operations of importance. The first case was lithotomy in a child about two years of age. As the proceed-

ing was different from that usually put in force by Mr. Fergusson, we shall be particular in describing it. On the patient being put on the table the bladder was sounded, and it was some time before the calculus could be detected. It could not be detected by the grooved staff which was first introduced, but it was necessary to use a sound with a short curve, when the stone was felt. The patient was then placed in the proper position, and Mr. Fergusson commenced the operation by making an incision in the raphe of the perineum, and extending it on each side of the rectum, making a X shaped cut. The groove of the staff was then cut into by means of the sharp-edged lithotomy knife. A knife with a beaked extremity, and cutting on each edge, was then introduced into the groove of the staff, and carried forwards. There was some difficulty in getting into the bladder; and it was not until after some few minutes (as Mr. Fergusson was extremely cautious) that the bladder was reached. The stone was then seized by the forefinger of the left hand; and a small scoop being introduced, it was readily extracted. The calculus was of the size of a small bean.

Mr. Fergusson remarked to the students that very frequently the operation of lithotomy was much more difficult in young children than in adults, and he wished to impress upon their minds the necessity of recollecting this, as at first sight they might deem the operation much more easy in children than in adults. The case under notice exemplified the cause of difficulty: for the bladder is so easily altered from its situation if any force be used, that it may be pushed completely before the surgeon's finger; and, unless very great caution be used, or if the surgeon were to attempt to make a dash, this would easily occur, and he would not be able to get into the viscus. They had seen how very cautious he had been in the present instance not to use any force. This rendered the operation somewhat longer and more tedious, yet safer for the patient.

The other operation was one of a very interesting and somewhat novel nature; for, although it was in reality a case of amputation at the ankle-joint, yet there was no foot to amputate. The history of the case is as follows. The patient, a young healthy man, had been received into the hospital about twelve months since, having suffered a severe injury of the foot, for which Chopart's operation was performed. The patient recovered from the operation, but it was noticed that the stump fell backwards very much, and appeared to be drawn upwards by the action of the tendo-achillis; consequently, before his leaving the house, the operation of dividing this

tendon was performed by Mr. Fergusson, with the hope that it would improve the appearance and use of the stump. He left the hospital and returned home. The last week the patient applied again, complaining that he could not use his leg; and, on telling him to attempt to walk, it was but too evident that his stump was almost useless; for he could only rest upon the front part of it, whilst the most fleshy and greater portion of it was drawn considerably backwards. The patient was particularly anxious to have his leg taken off, but Mr. Fergusson determined to dissect out the os calcis and astragalus; and, by turning it into an ankle-joint amputation, thus make a good rest for the poor fellow. The patient being placed under chloroform, the operation was performed in this manner. An incision was made from side to side, just along the old cicatrix of the former operation; another was then carried over the face of the stump, from each extremity of this to that. A somewhat triangular shaped piece of skin was enclosed. The ankle-joint was then cut into, and the dissection carried cautiously backwards, until the two bones, with the portion of skin incised, were removed, and a good flap was secured from the integuments covering the heel. As may be imagined, the operation was most difficult, and required the greatest care and patience; for, as Mr. Fergusson afterwards stated to the pupils, there was hardly any purchase for his left hand, the foot being gone; and, in these kind of operations, the left hand nearly did as much as the right.

ON THE EMPLOYMENT OF NITRATE OF SILVER IN THE ENTERITIS AND GASTRO-ENTERITIS OF CHILDREN.

EXTENSIVE as is the employment of nitrate of silver, observes Dr. Crocq, in the affections of those mucous membranes which are most accessible, it is but little employed, and much less than it merits to be, in affections of the more internal mucous membranes.

Dr. Crocq has employed this remedy with very considerable success in the enteritis of children, a disease which often assumes an obstinate chronic form, and in this state becomes fatal. He at first gave the nitrate in solution, in doses of one-sixteenth of a grain twice a day; this dose was administered to infants at the breast: finding that a larger dose could be safely administered, Dr. Crocq has gradually arrived at the dose of one grain dissolved in water, to which a drop or two of nitric acid is added to ensure the solubility of the salt, and to correct the insipidity of flavour. A very marked improvement,—frequently a complete cure, follows in forty-eight hours.—*La Presse Médicale, Brussels.*

Correspondence.

THE CHOLERA OF 1849—ITS COMMENCEMENT IN THE METROPOLIS.

SIR,—In the GAZETTE of the week before last I observe a letter from Mr. Haden, relative to a case of cholera which occurred in his practice in July 1848, and which he considers has been wrongly excluded from the list of early cases which I adopted in my Report to the Board of Health. I regret much that I have not been able to answer Mr. Haden's letter for so long a time.

Let me first state, that in the original Report which I presented to the Board of Health, Mr. Haden's case (as well as every case of cholera, or of disease closely resembling cholera, which I could find) was detailed at length. After its relation I expressed my individual opinion that it was difficult to know how, from the reported symptoms only, a distinction could be drawn between such a case and one of undoubted Asiatic cholera. Still, I excluded this case from consideration, chiefly for the following reasons among others.

The diagnosis was not absolutely certain. Every year in London extremely severe cases of English cholera, with rice-water evacuations, are seen, which, though not generally so intense as Mr. Haden's case, can be easily supposed to be but lesser degrees of the same disease. Even suppression of urine, I have been informed, will occur in these cases for as much occasionally as fifty hours, or even longer. Many practitioners might, then, doubt the accuracy of the diagnosis, if I had considered this case one of Asiatic cholera. To remove this doubt I could have offered no argument beyond the details of the case which had been already given, and on which, in fact, the doubt had been raised. If I had included the case, all those who doubted the diagnosis,—and there are many who would have done so,—would have considered, and justly, the whole subsequent argument vitiated by what they deemed a fallacy. A controversy would then have arisen respecting the diagnosis, which, as Mr. Haden will grant, from the discussion at the Western Medical Society, would not probably have been settled one way or the other, but would have ended in inspiring a general distrust of the Report.

On the other hand, no harm has been done by excluding the case from the general argument. The case is given, the time of its occurrence, and the accompanying circumstances, as far as known, are related. If any one deems that it should be included

in the list of undoubted cases, it may at once be added, and brought to bear on the subsequent argument; whereas, if it had been wrongly included, the subsequent argument would have been altogether falsified: the case as it now stands excluded can be added without difficulty. Had, indeed, the general results of the examination not been so absolutely certain, that it seemed to me a waste of time to deduce another argument from this case, I should have alluded to it more fully; but as the inferences which are to be drawn from it merely corroborate the deduction from the more certain cases which were selected, I thought it unnecessary to do so. Or if, on the other hand, Mr. Haden's case could have been traced to anything like contagion, then I should have inquired how far the admission of the case would have modified the argument and conclusions.

I conceive that of two difficulties I chose the least; and, if the Report were to be written over again, I see no other course to be adopted than the one I pursued. I had other reasons also for this course; but, as I am afraid of occupying too much of your space, and as the reason given above is the chief one, I will not relate them.

I am, sir,

Your most obedient servant,
E. A. PARKES.

3, Upper Seymour Street,
Portman Square,
Feb. 3, 1850.

APPARATUS FOR FUMIGATING THE SCALP IN CERTAIN CHRONIC DISEASES OF THAT REGION.

SIR,—Several practitioners have written to me for the purpose of ascertaining where they could procure an apparatus for the application of vapour to the scalp, described in a work which I have recently published on Diseases of the Skin of the Exposed Surfaces. Through an oversight, I did not give the address of the surgical instrument maker from whom it might be procured; but I hope now to rectify the omission by stating that the apparatus may be had at Mr. Ferguson's, 21, Giltspur Street, City, surgical instrument maker to St. Bartholomew's Hospital.

The Vapour Apparatus is extremely simple. It consists of a tin jar, about ten inches by four, with a conducting tube, on which is placed a stop-cock, for the purpose of diluting the vapour or turning it off, and an elastic cap of vulcanised India rubber, which fits closely to the head, so as to prevent the vapour from escaping.

The great majority of diseases of the skin are constitutional, and those of the scalp are not an exception to the rule; yet

every practitioner is familiar with the difficulty of removing the latter by the unaided influence of constitutional treatment.

Favus (*porrigo favosa*), for example, which is one of the most unsightly as well as the most inveterate of the eruptions of that region, may be temporarily relieved by tonics and fomentations, and the skin or scalp even made to appear clean and healthy; but the virus still remains, and consequently the "cure" will be but of short duration.

In this, as in other inveterate diseases of constitutional origin, the skin, from the force of habit, adapts itself to the morbid condition, which it retains with singular tenacity against the usual methods of treatment.

In all such cases the application of vapour, simple or medicated, as the case may require, to the diseased scalp, will be found a very efficient remedy. Where the object is to alter the vitality of the parts, it can be done more effectually by the repeated application of stimulating vapour (the skin being previously cleansed with any detergent wash) than by the employment of caustic lotions or ointments. Indeed, greasy applications of every kind may be advantageously dispensed with in the treatment of diseases of the scalp.

That variety of baldness which is the result of atony, or disordered nutrition of the hair follicles and bulbs, will be materially benefited by the use of the vapour apparatus.

THOMAS BURGESS, M.D., &c.

12, Half-Moon Street, Piccadilly,
Feb. 8th, 1850.

Medical Intelligence.

THE HUNTERIAN ORATION.

The Hunterian Oration was delivered yesterday in the Theatre of the Royal College of Surgeons, by F. C. Skey, Esq., F.R.S., Assistant-Surgeon of St. Bartholomew's Hospital.

In a most elaborate and eloquent address the orator briefly alluded to the intellectual character, but dwelt more especially upon the high moral attributes, of John Hunter. In the course of his tribute to the memory of that distinguished man, Mr. Skey read an autograph letter, in which John Hunter makes the proposal for, and conveys his first donation towards, the foundation of the Library of the then Corporation of London.

Mr. Skey then observed, that in recording the loss of the late Mr. Clift, the profession has to lament the breaking of the

last link of the chain which bound John Hunter to the present race of surgeons. Mr. Clift had been Hunter's pupil, and was the faithful steward of the trust committed to him, in the charge of his museum. The orator passed the highest, but not undeserved, eulogium on the integrity, truthfulness, and simplicity of character of the late Curator of the Museum.

The names of C. Aston Key, of J. G. Andrews, of Morton, and of Pennington, were mentioned with due honour as among the losses which surgery has to deplore during the past year.

The orator occupied the greater portion of his address with observations on the present position of the medical profession, its privileges, its obligations, and its degradation. The evils under which it at present suffers were assigned to four causes:—1st, the want of a high standard of preliminary education; 2d, the low state of professional ethics; 3d, the mode of remuneration adopted by general practitioners; 4th, the absence of public national honours as rewards of eminent talents or labours.

An individual (we do not know whether a member) attempted to address the audience before the orator entered, with a view to instructing members on Mr. Skey's opinions relative to the Charter of the College, but he did not succeed in obtaining a hearing. The reception, however, awarded to Mr. Skey, and the applause, loud and long, which greeted the orator at the conclusion of the address, must have satisfied all present that they had met to do honour to the illustrious dead, and to promote the well-being, not to foster the jealousies and dissensions which unhappily divide the profession.

X

UNIVERSITY COLLEGE, LONDON.

The Council, at their session on Saturday last, awarded the Flaherty Scholarship in Classics to Mr. Alfred Wills, of Birmingham: examiners, Arthur H. Clough, M.A., Professor Newman, and Professor Malden. At the same session, on the recommendation of the Faculty of Medicine, the Longridge prize of £40, for general proficiency, was awarded to Mr. Henry Briggs, of Halifax.

THE CHOLERA AT TUNIS.

The cholera is at this moment committing great ravages at Tunis, especially among Jews, of whom, up to the 18th Jan., from twenty-five to thirty had died daily. The Bey has, at his own cost, undertaken every means of arresting this scourge, and of alleviating the general distress, by food, medicine, &c.

DIFFUSION OF EPIDEMICS.

THE yellow fever has been very fatal at Antigua. Small-pox has broken out at Grenada, having been imported from Trinity Island. At Port Royal, Jamaica, yellow fever has also prevailed with great severity.

MEDICAL APPOINTMENT.

On the 5th of February Dr. Forbes Winslow, Editor of the Journal of Psychological Medicine, was balloted for and duly elected Fellow of the Royal College of Surgeons of Edinburgh.

Selections from Journals.

INTERNAL MECHANICAL OBSTRUCTION OVERCOME BY MECHANICAL FORCES. BY RICHARD H. TOWNSEND, M.D.

On the evening of December 16th, 1848, I was called in haste to visit Mr. J—M—, who was then labouring under strangulated hernia. Upon examination, I found an inguinal hernia on the right side, about as large as an ordinary-sized lemon, tense, and very painful to the touch, owing to the repeated trials which the patient had made for its reduction previous to my being sent for. Taxis was then resorted to by myself, but without success. I then ordered a large tub to be brought into the room, into which I placed the patient with his feet projecting outside, and added warm water until it reached his umbilicus. I then placed a ligature upon the arm and bled him from a large orifice thirty ounces, which made a perceptible impression upon the pulse, but without syncope. Then closing the orifice, and while the patient was still in the bath, applied firm and continued pressure to the tumor, and in forty seconds it was reduced. The patient was then taken from the bath, placed in bed, and a truss applied, but, owing to its ill fit, a second protrusion took place, and I was again sent for at one o'clock in the morning, to reduce it the second time, which was done with very little difficulty. Ordered a dose of castor oil to be given at 8 o'clock in the morning, and left.

Sunday, 12 A.M.—The oil having been thrown up, and sickness at stomach continuing, gave him half an ounce of the liq. ext. of senna, which was repeated during the evening, but without the desired effect.

Monday, 8 A.M.—Passed a restless night, with frequent vomitings of a greyish coffee-ground appearance, a tympanitic state of the abdomen, and constant eructations.

During the day gave him three several doses of cream of tartar and jalap, assisted by stimulating enemata, all of which proved equally ineffectual in removing the obstruction.

Tuesday.—The vomiting still continues; the abdomen distended; pulse 120, small and weak; and constant thirst. Gave one grain of calomel every hour, with fomentation and spiced plaster to the abdomen, without the least abatement of the symptoms. At 12 o'clock, midnight, met Drs. Tucker and Goddard in consultation, who coincided with me in the belief that there must be some internal obstruction, and that the patient would in all probability die. Croton oil, however, was given, and to be repeated at short intervals.

Wednesday, 10 A.M.—Had no sleep during the past night; the croton oil had been thrown up, and the vomiting was incessant. Pulse more feeble; insatiable thirst; eructations amounting to hiccough, and all the symptoms of approaching dissolution. I visited him again at 12 at noon, when I found him propped up in bed, with the bowl between his thighs, and he still vomiting and retching. I now resolved to try one more expedient; and, ordering a quart of ice-cold water to be thrown into the rectum by means of a forcing pump, I drew a sheet from the bed, twisted it into a cord, looped the middle of it over the patient's feet, and suspended him feet uppermost to the ceiling, with the injected fluid still in the bowels. While thus suspended, I kneaded the abdomen with considerable force: he was then let down, when the abdomen evidently appeared much softer, from the fact of the obstruction having been removed. Borborygmus immediately ensued; the vomiting ceased entirely from that moment, and in fifteen minutes the ice-water enema came away, bringing with it fecal matter. During the afternoon gave him two grains of calomel and half a grain of opium every hour, when at six o'clock he had another evacuation. Thursday morning.—Rested well during the previous night. Pulse 90, and all the alarming symptoms disappeared. Gave a purgative enema, which brought away copious evacuations of a most offensive character. Friday.—Still improving. Saturday.—Pulse natural, appetite good, and bowels regular. Sunday.—Discharged well.—*Amer. Journ. of the Medical Sciences.*

* * The treatment was as bold as it is novel. We doubt whether Dr. Townsend will find many imitators.

BOOKS & PERIODICALS RECEIVED

DURING THE LAST TWO WEEKS.

- El Observador Periodico de Ciencias Medicas y Naturales. Nos. 1 and 2. Barcelona, 1850.
- London University Calendar, 1850.
- London Journal of Medicine. Feb. 1850.
- Pharmaceutical Journal. Feb. 1850.
- Monthly Journal of Medical Science. Feb. 1850.
- Service-pipes for Water. An Investigation made at the Suggestion of the Board of Consulting Physicians at Boston. By E. N. Horsford Rumford, Professor in the University of Cambridge, U.S.
- The British-American Journal of Medical and Physical Science. Jan. 1850.
- The Domestic Economist. Part 1. Jan. 1850.
- Annals of Anatomy and Physiology. Conducted by J. Goodair, F.R.S.S. L. & E. &c. No. 1, Feb. 1850.
- Comptes Rendus. Nos. 2 and 3, 14 and 21 Janvier, 1850.
- American Journal of the Medical Sciences. Jan. 1850.
- Transactions of the American Medical Association. Instituted 1847. Vol. 2.
- The Pathology of the Kidney in Scarlatina. By James Miller, M.D.
- The Cyclopaedia of Anatomy and Physiology. By R. B. Todd, M.D. F.R.S. Part 38.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Feb. 9.

BIRTHS.	DEATHS.
Males..... 785	Males.... 477
Females.. 712	Females.. 480
1497	957

CAUSES OF DEATH.

ALL CAUSES	957
PECIFIED CAUSES	949
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	153
<i>Sporadic Diseases, viz.—</i>	
2. Dropsy, Cancer, &c.	44
3. Brain, Spinal Marrow, Nerves, and Senses	125
4. Heart and Bloodvessels	81
5. Lungs and organs of Respiration	175
6. Stomach, Liver, &c.	66
7. Diseases of the Kidneys, &c.	11
8. Childbirth, Diseases of Uterus, &c.	6
9. Rheumatism, Diseases of Bones, Joints, &c.	8
10. Skin.....	0
11. Old Age.....	56
12. Sudden Deaths.....	8
13. Violence, Privation, Cold, &c.	0

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	8	Convulsions.....	49
Measles.....	18	Bronchitis.....	84
Scarlatina.....	11	Pneumonia.....	69
Whooping-cough.....	36	Phthisis.....	135
Diarrhoea.....	20	Lungs.....	6
Cholera.....	0	Teething.....	10
Typhus.....	37	Stomach.....	8
Dropsy.....	18	Liver.....	9
Hydrocephalus.....	23	Childbirth.....	4
Apoplexy.....	31	Uterus.....	0
Paralysis.....	31		

REMARKS.—The total number of deaths was 91 below the average of the sixth week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.45
 " " Thermometer 44.
 Self-registering do. Max. 0.0 Min. 26.
 * From 12 observations daily. * Sun.

RAIN, in inches, .32.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 6° above the mean of the month.

NOTICES TO CORRESPONDENTS.

We are glad to perceive that Dr. Snow has given his attention to a very important subject in reference to Chloroform. His paper shall be inserted next week. We shall have great pleasure in publishing the concluding portion of Dr. Snow's remarks on Narcotism.

We have to thank Dr. Fresenius for a paper on the subject of Nutrition.

Mr. Bourne's case of Placenta Prævia will be inserted.

The copies of letters forwarded by Dr. Paris are inserted at page 278.

Mr. R. Symnot.—We regret that owing to our pages being quite full we could not this week find room for the letter.

The Committee of Poor-Law Medical Officers.—The Report has reached us, but too late for insertion in this number.

Mr. Moore's communication on the Pathology of the Aortic and Pulmonary Semilunar Valves will have early insertion.

Mr. H. Lee's letter next week.

Mr. Bromley.—Our friendly advice would be against such a proceeding. We much doubt whether such a suit would be successful.

The publication of the subjoined letter may serve as a caution to our readers:—

"SIR,—It may be of service to my professional brethren of this metropolis to caution them against a person who called at my house on Monday, the 6th inst., during my absence from home. Being admitted to the parlour, the servant was imprudent enough to leave him there alone, on the usual plea of writing a note to me. Having done so he retired, taking with him various little articles most convenient for removal. By inserting this, you will oblige,

Your obedient servant,
 "THOMAS LIGHTFOOT, M.D.

"14, Keppel Street, Russell Square,
 "Feb. 7, 1850."

Copy of the Note left.—"Mr. Wm. Harris requests the favour of Dr. Lightfoot's attendance as soon as he can conveniently call, either to-morrow morning or evening."

Corrigendum.—A mistake occurs in the title of the paper by Mr. Field, read at the Medical-Chirurgical Society. Med. Gaz. January 18, page 128, col. 2, instead of "unsuccessfully," it should be "successfully opened."

Lectures.

LECTURES

ON

LACTATION, AND THE DISORDERS
INCIDENT TO THE PUERPERAL
STATE.

By E. W. MURPHY, M.D.

Professor of Midwifery, &c. in University
College, London.

LECTURE XIV.

POST-PARTUM INFLAMMATIONS.

Acute inflammations—Sthenic and asthenic—Inflammation of the mucous membrane of the vagina and uterus—Sthenic inflammation of the vagina—Causes—Symptoms—Treatment—Asthenic inflammation—Very dangerous character—Injurious effects consequent on the inflammation—Inflammation of the lining membrane of the cervix uteri—Of the lining membrane of the uterus—Inflammation of the fibrous structure of the uterus—Of the peritoneum—Of the sub-peritoneal tissue—Of the uterine veins.

GENTLEMEN,—*Inflammation of the uterus and its appendages* is a frequent consequence of parturition. A severe labour gives rise to a certain amount of congestion in the vagina and cervix of the uterus. The passages are in the condition that a very slight cause would light up inflammation. The labour itself, and too often the management of it, gives rise to many causes of injury, and hence inflammation is the result. Again, it often happens that the treatment which is essential to the delivery of the patient, or immediately afterwards, becomes a cause of inflammation. You may be obliged to pass the hand into the uterus to turn the child, or to remove an adherent placenta: some injury may be done to the cervix or the cavity of the uterus. If the patient suffer from severe hæmorrhage, the cold that is applied to the vagina and about the uterus, the different modes of exciting the uterus to contract,—amongst the rest the introduction of the hand, or the injection of cold water into it,—all are causes that excite inflammation in the body of the uterus when reaction takes place. Lastly, morbid poisons are sometimes absorbed, and produce inflammations of the most fatal character. The form which inflammation may assume is as various as the causes that produce it. Inflammation may be confined to the

vagina and mucous membrane of the uterus; it may engage the body of the uterus, the ovaries, and the peritoneum; the veins of the uterus may be its seat. The inflammation is generally acute, but it may be chronic; and lastly, its character may be sthenic or phlegmonous, asthenic or typhoid. Acute post-partum inflammations may be divided into *sthenic* and *asthenic*; and, in order to simplify the symptoms, it is better to confine your attention to inflammation as it affects separately the different tissues of the generative organs. We shall first consider—

Inflammations of the mucous membrane of the vagina and uterus.—This form is generally met with after severe labour with the first child. The vagina is less disposed to yield to the pressure to which it is exposed: there is a greater degree of congestion; and, if delivery be delayed, inflammation is a very likely consequence. It is not, however, protraction alone that excites it. Inflammation is more frequently produced by the very means that we adopt to shorten labour. It is here that the use, or rather the abuse, of instruments becomes so mischievous. It is in this condition of the vagina that examinations often repeated with the exploring finger is calculated to do so much injury. If the perineum happen to be torn during delivery, which is highly probable, the wound becomes an exciting cause of inflammation.

The symptoms are chiefly local. The patient complains of a great degree of soreness at the vulva; the urine is retained, which is perhaps the first symptom that attracts attention; the lochial discharge is more than usually offensive, and the patient can get little rest. If an attempt be made to pass the catheter, the pain is excruciating if it should not pass at once into the urethra; and hence, in a case of this kind, this apparently simple operation becomes an *experimentum crucis* of the tact and experience of the practitioner. The cause is obvious: the vulva being inflamed, the nymphæ, the vestibule, the orifice of the urethra, and especially the clitoris, all are exceedingly tender: the characters of the trumpet-shaped opening of the urethra is altogether lost; the parts surrounding the orifice are so swollen that they almost obliterate it, leaving only a pin-hole opening not easily discerned. Hence the inexperienced practitioner, being at a loss to find it out by touch, may make very tedious and painful attempts to pass the catheter, and fail. The urine, however, must be withdrawn: assistance is sent for, and the catheter is then passed at once. Now this awkwardness is never forgotten,—I might almost say, is never forgiven; and, therefore, if you wish to avoid

one cause of those exposures that sometimes reveal incompetency, you will endeavour to educate your sense of touch on this as on other points of practice, and learn, by frequent examination of the urethral orifice in ordinary cases of labour, its exact situation and relations. The pulse is generally frequent and resisting. The abdomen may be perfectly free from tenderness, the uterus may bear pressure without inconvenience, the iliac regions may be without pain, but this frequent pulse is a certain index that inflammation nevertheless exists, and the probability is that it has its seat in the mucous membrane of the vagina.

Sthenic inflammation of the vagina may terminate in resolution without any injury or abrasion of the passages, or it may be followed by abrasions and superficial ulcerations of the mucous membrane, or may end in slough. The last is the only serious result, because the seat of the slough is usually so unfavourable. When the head of the child is passing through the brim of the pelvis into the cavity, the points that receive the greatest pressure are the extremities of the conjugate axis: the head is pressed strongly against the pubis and promontory of the sacrum. The urethra, which lies between the head and pubis, is sometimes so bruised that slough is the result, and fistula the consequence of slough. Hence may be established one of the most unmanageable and distressing affections to which the parturient female can be exposed,—a constant stillicidium urine through the vagina. A slough at the opposite point, the promontory of the sacrum, is usually within the cervix uteri, which may thus be very much weakened. When the slough separates, and the surface heals, this portion of the cervix is greatly thinned, causing no further immediate injury, but in a future labour exposing the uterus greatly to the risk of laceration. So also the vagina, at its junction with the cervix, may become gangrenous, which can scarcely occur without the neighbouring tissues being also involved in the inflammation. The reticulate cellular tissue between this portion of the vagina and the peritoneum may become inflamed, and produce those extensive suppurations that are described as pelvic abscesses, or the peritoneum itself may be engaged. Thus a termination of vaginal inflammation in slough must always be looked upon as serious.

The treatment of phlegmonous inflammation of the vagina is essentially antiphlogistic. Warm emollient enemata, warm fomentations to the vulva, and injections into the vagina of warm decoction of poppies, will contribute very much to

allay the distress which the patient experiences from the great tenderness of the passages. Mercury may also be given moderately, so as to prevent the extension of the inflammation, but should not be used to the degree of causing salivation. If the urine be retained the catheter should be passed every six hours, until the inflammation is sufficiently subdued to enable the bladder to act without assistance. As soon as this takes place warm fomentations may be omitted, and cold astringent injections substituted; sol. liq. plumbi, in the proportion of a drachm to a pint of distilled water; the alum lotion, ten grains to the ounce; or the infusion of catechu may be used with advantage. By such means inflammation of the sthenic character will generally subside without difficulty; but when it has passed away, and the lochia has ceased to flow, it will be necessary to make a careful examination of the cervix uteri and vagina with the speculum, in order to detect any lesions that may be left behind.

Asthenic inflammation of the vagina is a far more serious result of labour: the whole vagina is quickly engaged in the inflammation, which sometimes extends to the uterus. Its tendency is to terminate rapidly in gangrene, which is not confined, as in phlegmonous inflammation, to a point or a small space, but spreads over a larger surface. Thus an extensive slough has thrown the rectum and vagina into one; large portions of the mucous membrane of the vagina have been separated, and sometimes even the whole of it has been detached and thrown off. If the patient recover from such consequences, she is still exposed to the risk of further mischief. The new vaginal surface may heal most unfavourably: adhesions sometimes take place between the opposite walls of the vagina, so as to obliterate the canal, or bands of lymph may pass from one side to the other. In some instances the vagina becomes quite contracted in the centre, forming a kind of stricture; and thus, if the patient become again pregnant, and labour take place, new difficulties oppose themselves to delivery, of a character still more dangerous than those that may have previously existed. The vagina and the uterus have been torn during labour, in the effort to overcome this stricture. The causes that give this character to the inflammation are either those that produce constitutional depression—foul air, bad diet, mental depression, &c.—such causes as will alter the healthy condition of the blood,—or the direct absorption of some morbid poison that has the same effect. Here, as elsewhere, when the blood is in this state, inflammation assumes the form

of erysipelas, and rapidly passes into gangrene.

The symptoms that mark asthenic inflammation are the foul, dark, and offensive lochial discharge: there is a certain amount of tenderness and soreness in the vulva and vagina, but not to the same degree as exists in phlegmonous inflammation. The typhoid irritative fever that attends the inflammation is very characteristic. The rapid pulse, dry furred tongue, burning surface, and sallow aspect, are the common characters of this fever, whether the cause be in the vagina or the uterus; but I have observed that when the vagina is thus inflamed, pimples appear about the lips, which soon become pustules that form dark crusts, and thus, besides the usual sordes about the teeth and gums, the mouth is sometimes encircled by a chain of these pustules in different degrees of maturity. When this inflammation is the result of the direct absorption of some morbid poison, the accompanying fever is more distinctly that which we shall have again to describe as "puerperal fever," and must be considered separately; but there may be erysipelatous inflammation of the vagina without puerperal fever.

The treatment of asthenic inflammation is the reverse of that which we have been considering. The patient requires support throughout; bark, wine, and opium, are essentials; depletion and purgatives should be avoided, at least such as might act strongly on the intestines. Stimulants, also, are necessary; camphor, ammonia, and the æthers, may be given cautiously in the cases where there is great depression of the vital powers. Quinine is at present the favourite mode of administering bark, and when it is selected it may be given in wine; but in these cases I am inclined to go back to the older preparations, to give the infusion of cinchona, in combination with the compound tincture of cinchona, to which you may add a neutral salt—the potassio-tartrate of soda, for instance—that will act mildly as an aperient. When the inflammation is subdued, your cares are not concluded. The sloughs that have taken place in the vagina are either detached or in process of separation: attention must, therefore, be given to the manner in which the denuded surfaces heal. So long as the slough is adherent, and the discharges dark-coloured and offensive, antiseptic injections should be assiduously used; camphorated spirit is sometimes selected, but I think the solutions of the chlorate of soda, or chlorate of potash, preferable. When the slough is detached, equal care should be paid to the healing surfaces, lest adhesions should take place that may be the foundation of future mischief. It would be well to pass a cylin-

dric speculum daily, as far as the os uteri, and to touch the abraded surfaces lightly with a solution of the nitrate of silver (ten grains to the ounce): a solution of alum in the same proportion may also be injected into the vagina three or four times in the day. The introduction of the speculum for this purpose must be made with great caution and gentleness; the surface of the vagina is, necessarily, extremely tender; portions of the mucous membrane are destroyed, and hence this passage is very easily injured. With proper care, however, the speculum may safely be used, and it is essential to do so in order to prevent unfavourable union taking place.

Inflammation of the lining membrane of the cavity of the cervix uteri is generally of a chronic character, and may be recognized by the appearance of a viscid mucous discharge, either mixed with the lochia or continuing on their decline. It may be the result of lacerations of the cervix uteri or of the mucous membrane itself that lines the cavity.

The symptoms are seldom so severe as to interfere much with the patient's recovery. She is generally able to get up and go about in the usual time, only she complains of a dull aching pain about the loins and over the sacrum, increased by the upright position and by exercise, relieved by rest; she speaks also of a whitish substance (the collections of viscid mucus) passing from the vagina. *The treatment* cannot well be undertaken until the lochial discharge has ceased, and this viscid mucus only remains. A solution of nitrate of silver may then be applied to the surface every third or fourth day, the bowels kept open by tonic saline aperients, and the patient kept perfectly at rest. By such means the inflammation will gradually subside.

Inflammation of the lining membrane of the cavity of the uterus seldom occurs alone. Either the fibrous structure of the uterus becomes engaged, or the inflammation extends to the uterine veins. It may therefore be taken in connection with inflammation of either of these structures, the former producing phlegmonous or sthenic inflammation of the uterus; the latter phlebitis.

Inflammation of the fibrous structure of the uterus is generally the consequence of severe labour, especially if it be much protracted. It may also be the result of accidental causes; as sudden exposure to cold air, cold applications to the uterus, direct injury either from instruments or too rough manipulation.

The symptoms generally appear when reaction takes place; that is, about forty-eight hours after delivery. The pulse continues frequent, about 100, and full. There is tenderness on pressure in either the left or

right inguinal region, more generally the left: the fundus uteri feels rather larger and firmer than usual. If slightly touched, the patient does not complain, but if firmly compressed the pain is very great: the lochial discharge is suppressed, and the milk may not be secreted. If the inflammation is not subdued in the first instance, rigor, thirst, and other evidences of symptomatic fever, will present themselves, and the danger to the patient increased, because such inflammation is seldom stationary: the neighbouring tissues soon become engaged, and when it extends to the peritoneum the nature of the case is completely altered.

The treatment should be prompt. If the slightest tenderness should be felt in either inguinal region, accompanied by a quick pulse, local depletion should be immediately had recourse to; twelve or twenty leeches may be at once applied, followed by warm fomentations; the bowels may be relieved by warm enemata, and mercury, if necessary, administered. Pil. Hyd., with Extr. Hyocyam. Hyd. c. Creta, and Dover's powder, or calomel and opium, can be given, according to the severity of the symptoms. If the peritoneum become involved, the proportion of opium must be increased, or opium may be used exclusively.

The success of this treatment depends entirely upon your promptitude. The inflammation may be easily subdued when the first slight tenderness is felt in the inguinal region; but if this first stage pass unnoticed, or be misunderstood, the inflammation will rapidly extend itself to the peritoneum, or it may engage the fine reticulate sub-peritoneal tissue. It is not advisable to give very active purgatives in this form of inflammation lest the irritation of the intestines should be communicated to the uterus, and counteract your object. It sometimes happens that the bowels will not obey the stimulus applied to them, a precautionary effort of Nature, which, if it be misinterpreted, and should lead to the use of more powerful cathartics, may do infinite mischief: a violent diarrhoea may be the result, accompanied by tenesmus, and the renewal of the inflammation in a more aggravated form. It is for these reasons that warm emollient enemata, which act as fomentations, are to be preferred while the inflammation is active; but when it is subsiding, mild aperients may be given with advantage.

Inflammation of the peritoneum is generally a consequence of inflammation of the uterus: metro-peritonitis is perhaps the most frequent form of inflammation that we meet with after labour. It may be partial, confined to the immediate neighbourhood of the uterus, or general, and engage

the whole peritoneum. The former will, however, rapidly merge into the latter, unless it be arrested in its first stage.

The symptoms that characterise the inflammation are sufficiently distinct. Locally, the tenderness of the uterus, and in either iliac region, is greater than in simple metritis: slight pressure causes much pain, which becomes intolerable if the pressure be increased. That portion of the abdomen about the seat of the inflammation is swollen and puffy, so as to render the outline of the uterus very undefined. The pulse is quick, wiry, and incompressible; the countenance anxious; the tongue rather dry, with a white fur in the centre, the edges and point red: there is great nausea, and sometimes vomiting. If the inflammation be not at once subdued, it very rapidly spreads over the whole abdomen, the swelling of which becomes general, accompanied by great tenderness over the surface: the pulse is still more contracted and wiry, and the countenance more expressive of intense suffering. Vomiting is now incessant, the inspiration laboured, and any effort at respiration very distressing: hence the patient lies on her back, having the knees drawn up and the thorax raised, so as to prevent as much as possible the pain that inspirations induce: thus they are never completed, but are cut short by a rapid expiration, sometimes accompanied by cough. The bowels are constipated, and the skin dry, with the exception of irregular partial sweats about the face and neck. These symptoms seldom continue beyond twelve or twenty-four hours, but, if the inflammation is not controlled, are succeeded by those of constitutional exhaustion. The abdomen becomes perfectly tympanitic, but sometimes loses its acute tenderness; the pulse is extremely rapid, 150 or 160, and feeble; the countenance is cadaverous; vomiting is no longer convulsive; a greenish fluid is discharged from the stomach, with little or no efforts; violent diarrhoea sets in; the extremities are cold, and the surface is more or less covered with a greasy perspiration. Such symptoms soon close the scene.

The treatment we have already discussed in connection with ruptures of the uterus: the observations that we have made in reference to traumatic peritonitis apply equally to idiopathic inflammation. In the one form, as in the other, we doubt the propriety of mercury or purgatives, and have the greatest confidence in the free use of opium. In idiopathic inflammation of the peritoneum, active depletion is more essential than in that which accompanies rupture of the uterus, because in the latter the shock of the accident, and the hemorrhage that has taken place, effectually sub-

duces the action of the heart, and renders depletion less necessary. The success of your treatment is almost a question of time. If you recognise the characters of the inflammation in the first stage, when it is partial, active depletion, opium, and the vapour-bath, will very likely subdue it; but if this period is passed, and the whole peritoneum is involved, the chances of your patient's safety are more doubtful; still, however, much may be done, if the line of treatment we have marked out be carefully followed.

The *pathological appearances* of inflammation of the peritoneum are worthy of attention, because it appears to us of some importance that they should not be confounded with those morbid changes in the peritoneum which are the result of puerperal fever. I have had the opportunity of observing the peritoneum in different stages of inflammation, when patients died from ruptured uterus, six, twelve, twenty-four hours, and sometimes a week after the accident. The morbid appearances may be grouped into two classes, corresponding to the two stages of the inflammation. In the first group we find the peritoneum highly injected, the arterial capillaries traversing the intestines in red lines, surrounding them like bands; the cavity of the peritoneum filled with straw-coloured serum, sometimes rendered brown by admixture with blood; a glutinous lymph unites the intestines to each other, and the intestines to the uterus. If you separate these parts from each other, the lymph is drawn out into strings, like melted glue, or they may break off more like the slighter adhesion of thick mucus. If blood is poured into the peritoneum, as in ruptures of the uterus, a green tinge is often given to the surfaces with which the blood comes into contact. These appearances may be observed when death takes place within twenty-four hours after inflammation sets in; but if the struggle is more prolonged, the morbid alterations very much depend upon the immediate cause of death. The inflammation may give way, to a certain extent, to the strength of the constitution, or to the treatment, but a violent diarrhoea carries off the patient. On the other hand, the constitution may yield to the inflammation, and the patient sink from exhaustion. The second group of appearances are not, therefore, always alike. In the former case the intestines are generally found strongly united to each other and to the uterus by lymph: they are not so highly injected, and the quantity of serum is less than in the first group. In the latter the characters are more like what accompanies puerperal fever. The intestines have rather

a livid hue, from the injection of the venous capillaries; the serum is mixed with the peculiar creamy exudation that we call non-plastic lymph, which gives it a lactescent appearance; the intestines are often covered with the same lymph that lies upon and between them. In the coils of the intestines it is most abundant, and masses of this so-called lymph are often found in these situations, the central portions dissolved into a purulent-looking fluid contained within a thin outer layer of lymph like the cyst of an abscess: thus these collections may be easily mistaken for abscesses. These morbid changes seem to be the result, not of inflammation, in the sense in which it is generally understood, but of exhaustion. Serum and adhesive lymph are the products of the former: this creamy exudation, which is not adhesive, seems to be the effect of the latter. We shall have again to refer to it when speaking of puerperal fever, which always produces it in large quantity.

Inflammation of the sub-peritoneal tissue is generally observed at a period rather later after delivery than the preceding inflammation: it may occur about the twelfth or fourteenth day, and is often only the extension of an inflammation previously existing in the uterus. The patient may have had an attack of metritis, which, being incompletely subdued, terminates in inflammation of this tissue; more commonly the uterine appendages are the seat of inflammation that extends to this structure, by which they are abundantly surrounded. Being, therefore, generally a consequence of some preceding inflammation, it appears later, sometimes as late as the second or third week after delivery. Hitherto this form of inflammation has been but little understood: it was only when it terminated in serious mischief, in the formation of extensive abscesses, that it received any attention; and thus, under the name of "pelvic abscess," we find descriptions of it and its consequences given by Lever, Bell, Dogherty, Churchill. It is necessary, therefore, to recal to your recollection the anatomical relations of the sub-peritoneal tissue, to render intelligible to you the course its inflammation will take. The uterus is an organ liable at any time to variations in its size and position. In order to admit of this mobility, the peritoneum is much less intimately united to it below than at the fundus; the folds of the peritoneum, also, that are known as the broad ligaments, are not closely applied to each other, and are readily removed from the Fallopian tubes and ovaries which they enclose. A fine reticulate tissue is interposed everywhere between the peritoneum and this portion of the uterus and its appendages. It may be traced, although

with difficulty, to the fundus, and forms part of that fine cellular tissue that accompanies the large vessels into the abdomen, it descends to the inguinal ring, under the name of "fascia propria." The effect of inflammation on this structure is the rapid production of pus, which, if it is not circumscribed, or does not soon escape, will accumulate, and form those extensive abscesses that are described by different writers. Thus a large abscess is found surrounding and obliterating the ovary, or pus may be observed burrowing beneath the pelvic fascia, and again it may take the line of the iliac vessels, and make its way into the abdomen along the psoas muscle: thus an abscess of this kind has sometimes been confounded with psoas abscess. Inflammation of this tissue may therefore be attended with very serious consequences, and, coming on insidiously after a previous inflammation that had been subdued, may blight the most flattering hopes of recovery.

The *symptoms* that characterize it require a watchful attention, because they are frequently completely disguised by the more prominent symptoms of the antecedent inflammation. Thus it may happen that an attack of metritis seems to yield; the uterus is free from pain on pressure; the abdomen is soft; the patient only complains of inability to move, which she attributes to weakness rather than pain; the pulse still continues frequent, and a slight rigor may have taken place. If these symptoms pass unnoticed, the increasing weakness of the patient will chiefly attract attention: the rigors may return, followed by irregular perspiration; she sleeps badly, and may complain of pain in passing her motions; sometimes a diarrhoea sets in, under which she may sink. If the pus find its way to the surface, either in the groin, or the hip, or in the neighbourhood of the rectum, the case is tolerably clear, because the local symptoms are so obvious. It may also burst into the vagina or rectum, and be thus discharged; but if it take the course of the iliac vessels, and pass into the abdomen, the case is hopeless. Our most important object, therefore, is to detect this inflammation if possible in its early stage, when there are few symptoms to guide us; and it is here that a careful vaginal examination is of so much importance if we have the least suspicion of its existence. The inability, therefore, of the patient to move, the continued frequency of the pulse, and especially the occurrence of a rigor, should not be lost sight of. A vaginal examination should be at once made: the uterus will generally be found displaced, and less moveable than it ought to be; the cul de sac of the vagina, behind the os uteri, may

be pressed forward, and present a tumor like the retroverted uterus; or the superior wall between the bladder and uterus may be pressed down towards the opposite side, contracting the space in the vagina. The uterine sound would be a useful aid in this examination, as it would determine the exact direction of the uterus, and to a certain extent its mobility; but it should be used cautiously, and if the least difficulty occur in passing it into the uterine cavity, it should be withdrawn. The patient will generally complain of pain as the more swollen parts of the vagina are touched; and you may sometimes detect at the most prominent point a doughy oedematous feel, that is the next step to fluctuation. If these signs are detected early, the patient has a favourable chance of recovery, unless there should be some extraneous cause, as the absorption of a morbid poison, in operation to prevent it.

The *treatment* of this form of inflammation must be directed to retard, if possible, the formation of pus; and if you cannot succeed in this, to prevent, at least, its accumulation. If, therefore, any fulness should be felt in the vagina, or irregularity in the position of the uterus, it is better at once to apply leeches through the speculum, in the neighbourhood of the os uteri; to foment the pelvis carefully, both by fomentations applied externally, and by warm injections into the vagina and rectum. If the patient is able to move without distress, the warm hip-bath would be very useful; but if motion cause pain it is better to omit it: mercury may be given moderately, with opium. Hydr. c. Cræta, with Dover's powder, forms a good combination—three to five grains of each may be given every third hour. If these means fail to arrest the inflammation, and rigors take place, if the vagina become fuller, the uterus more fixed, and other evidences of the formation of pus be present, it is necessary to support the strength of the patient, because the quantity of pus that accumulates is almost in direct proportion to her weakness: bark, wine, opium, and a more nutritious diet are essential. The pointing of the abscess into the vagina should be looked for, and if the swelling that was first observed seems to accumulate, and to become softer, an opening may be made through the speculum, with a long-handled scarificator, or, if you please, an exploring needle may first be passed into the tumor, and if pus escape the opening can be enlarged.

When the abscess gains an exit for its contents, the patient has a very favourable chance of recovery if a proper treatment be carefully pursued. The great danger of these cases is that it may not do so, but pass into the abdomen.

Inflammation of the uterine veins is occasionally met with after labour. It may be the consequence of severe labour; but the causes most likely to give rise to it are accidental. It sometimes follows violent floodings: the means used to arrest hæmorrhage, the extreme refrigeration, both externally and internally, of the uterus, excites violent reaction and inflammation afterwards. The irritation caused by the introduction of the hand for the same purpose, and the removal of an adherent placenta, predisposes to inflammation of the veins. The absorption of putrid matter, the residue of a decomposed ovum, or the fragments of a putrid placenta, will also excite inflammation; but as this cause may be better classed with the absorption of morbid poisons generally, we prefer considering them in connection with that subject.

The symptoms by which you recognise this form of inflammation are of a typhoid character: a rigor occurs about the time that the milk should appear; no secretion takes place, the pulse is rapid and unsteady, the tongue dry; the countenance drawn, and rather sallow; the surface hot, without perspiration: the patient is watchful, and sometimes incoherent; the lochial discharge is very offensive. As the inflammation proceeds, rigors return at irregular intervals; the pulse increases in frequency; the tongue becomes furred; sordes form about the teeth; the countenance is more sallow and shrunk; the eye glassy; and the patient muttering in delirium: the whole surface is yellow and burning, presenting petechiæ: profuse sweats sometimes burst out upon it. The lochial discharge is dark and putrid, and portions of the mucous membrane of the vagina may separate in a state of slough. If the inflammation be not subdued the patient sinks rapidly in two or three days from its commencement; but if it yield to treatment, it generally terminates by metastasis, that is, some distant part becomes inflamed as the uterine phlebitis subsides; and this inflammation is generally critical: thus the axilla, the leg, the groin, the buttock, may be the seat of inflammation that usually terminates in the formation of pus, and, when it is discharged, the patient soon recovers. There is no form of inflammation that prostrates the vital powers more completely than phlebitis; *the treatment* is, therefore, chiefly stimulant; and, unless in the very commencement of the attack, antiphlogistics cannot be employed: moderate local depletion, aperients, and mercury may then be used with advantage; but at a later period, opium, wine, and stimulants are indicated. The character of the lochial discharge should be carefully

attended to: weak solutions of chlorate of soda or of potash may be injected into the vagina to correct the fætor of the discharge, and to prevent the extension of sloughs. If the inflammation subside, bark should be given freely. In the use of stimulants some caution is necessary: they should not be carried to excess, but given moderately, watching their effect, especially on the pulse. If they act beneficially, the pulse becomes more steady, fuller, and softer; presently its rate will decrease: if they are injurious, the pulse rises in frequency, is more contracted, and *seems* feebler: when such effects are observed stimulants should be discontinued, as they only rekindle inflammation.

The pathological appearances of phlebitis are sufficiently characteristic. The cavity of the uterus is generally covered with a greenish sordes, which is easily scraped off; the fibrous structure is more friable than usual, and may be softened in some parts. On its surface, especially where the placenta had been attached, the uterine veins may be observed to project in little prominences. If these be examined, the opening of the veins are found contracted, the coats somewhat thickened; and if the vein be exposed its surface is red and velvety: they are frequently plugged with putrid coagula, and sometimes are filled with pus: small collections of pus are occasionally met with in the substance of the uterus: the peritoneum may not present any morbid change beyond a duller and less glistening appearance, and some tinge of lividity.

In this brief account of uterine phlebitis we have confined your attention to its least complicated form,—that inflammation which is produced independently of the absorption of a morbid poison, and which follows the same course in the uterus as elsewhere. It is necessary to recollect that such an inflammation may occur, and is sometimes met with, where there are no causes of an epidemic character to produce it, and when it is evidently not the result of the absorption of putrid matter. Take, for example, a case of extreme flooding, followed by inflammation of the uterine veins: the cause here is as obvious as the effect, and we have endeavoured to describe to you the course such an inflammation will pursue. We shall have again to speak of that more common form of phlebitis that is met with in cases of puerperal fever; but at present we are anxious to point out to you that there may be phlebitis without puerperal fever, which if you were to form your opinions by all that is written on the subject would seem to be at least doubtful.

Original Communications.

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ON THE
PRESENT STATE OF LUNACY, AND
OF LUNATIC ASYLUMS,

AND ON THE NATURE AND TREATMENT
OF MENTAL DERANGEMENT.

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(Read before the *Médecino-Chirurgicale Society*
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[Continued from p. 275.]

As epilepsy and insanity are most intimately connected with each other, it may not be out of place to mention that two cases of epilepsy have come under my observation where the epileptic convulsion was distinctly produced by loss of blood. The first occurred in the person of a female pauper named P., living at Anstey, a parish in Hertfordshire, whom I frequently saw in my capacity of medical officer to the Buntingford Union. These seizures were the most violent I ever witnessed: on inquiry of herself and family in the intervals of her malady, I ascertained that she had early in life been bled by a surgeon for some other disease, and, the bandage having unfortunately slipped after the surgeon had left her in bed, she was accidentally discovered by some one in a state of deliquium, the bed thoroughly saturated with blood, and her face completely blanched by the enormous hæmorrhage. By means of brandy and other stimulants she was after much difficulty restored to consciousness, but the fits speedily after made their appearance, and will, in all human probability, cling to her until she has shuffled off this mortal coil.

The second case occurred in the person of a plethoric tradesman, named W., of very free habits, whom I had bled for an injury of the ribs, and who had an epileptic convulsion on losing about a pint of blood. In his case, the fits, though mild, are usually more frequent when he is about sedentary employments, or has disturbed the equilibrium of the circulation, or the nervous sys-

tem, by alcoholic indulgence. Pinel, in illustration of his opinion of the character or essence of mental derangement, has a chapter with the following superscription:—"Are not maniacal paroxysms the effects of a salutary reaction of the system?" In proof of which he proceeds to remark—"The celebrated Stahl, in his views and treatment of fever, soared above the petty province of philo-pharmaceutic medicine, to the general consideration of a principal of conservation, whose office it is to repel any attack upon the system injurious to its well-being, or fatal to its existence. May not the same principle be applied to the theory of insanity? In the beginning of this complaint an unusual sensation is felt in the epigastric region, sympathetic, it would appear, of some great commotion in the centre of the system; which, upon repetition, is felt to extend as far as the abdominal plexus, and to produce a spasmodic oppression of the præcordia, heat of the bowels, and costiveness. Soon after, a general reaction is excited, stronger or weaker according to the sensibility of the individual. The face becomes flushed, the circulation quicker, and the epigastric powers appear to receive a secondary impulse very different from the first in its nature and effects. Muscular irritability is now greatly increased, and the understanding itself is involved in the movements which nature has established for throwing off the disease. Several of the functions are either wholly or partially changed: sometimes they are impaired, sometimes increased in their energy. In the midst of these disturbances the gastric and abdominal affections, after having continued some time, cease. A calm succeeds, and brings with it a recovery more or less permanent. If the paroxysm has not arisen to the degree of energy necessary, the same circle of action is again repeated and continued periodically, diminishing gradually in violence, until a complete recovery is established. Out of thirty-two madmen, with irregular periodical insanity, twenty-nine were restored; some by a prompt suppression, others by a progressive diminution in the violence and duration of the paroxysms. The remaining three continued to be visited by fits of increasing violence, until nature, at length exhausted, gave up the dismal conflict. Is it not probable that in those unfortu-

nate cases, the general and salutary laws of the vis conservatrix were impeded in their action by some organic lesion of the nervous system? We meet with analogous exceptions in fevers, both of the intermittent and continued type." The sagacious and observant Pinel, has, to my thinking, bequeathed us an excellent set of medical problems, which our own industry, professional tact, and careful observation of disease, must teach us to solve. It is not so much insanity that kills our old chronic cases, though it undoubtedly has a direct tendency to shorten life; but probably the human frame, deprived of the mind (or that faculty shorn of its pristine splendour), more easily becomes a prey to all the numerous ills which frail human flesh is heir to; the beacon light of our existence has been quenched, or the cruse of oil has run low, and we cannot avoid the hidden rocks and breakers which our pleasant vices, or an hereditarily tainted, or defective physical organization, have interposed between our ill-fated bark and the haven of her final destination.

At one period of my life I entertained the notion that mental derangement had the happy gift of conferring immunity from the ravages of other diseases; but experience of a fatal outbreak of typhus fever amongst the attendants first, and afterwards the patients at the Lincoln Asylum, during my surgery,—subsequently, an epidemic of erysipelas, which occurred soon after my leaving that establishment to enter on my duties at the General Hospital (though I still spent much of my time in the asylum, and carefully examined the bodies of several who died); and still more recently, an attentive perusal of the report issued by the justices of the Wakefield Pauper Lunatic Asylum, relative to the late fearful and widely fatal outbreak of cholera which has swept off so many of their lunatics,—have clearly satisfied my mind that mental derangement or unsound mind is not calculated to improve the tone of vital energy, but rather to depress it, and, therefore, as a necessary consequence, to afford no exemption against other maladies. Look at the frightful ravages which cholera has made amongst those who have weakened the tone of the nervous system by habitual intemperance; and there is a much closer analogy between drunkenness and insanity than many persons are aware.

Pulmonary consumption, again, slays its thousands among the inmates of our large lunatic hospitals; and though, doubtless, in many instances, the two diseases may vary in their relative intensity at different periods of their progress, still no fact is more certain than that the inexorable destroyer will surely grasp his victim in the end.

I might here enumerate many other incontestable facts in favour of the salutary effects of paroxysms of periodical insanity; a few shall suffice:—Five young men, between the ages of eighteen and twenty-eight, were admitted at Bicêtre, whose intellectual faculties appeared really obliterated. They continued in that state, some for three months, some for six, and others for more than a twelvemonth. After these intervals of different duration they were severally attacked by a paroxysm of considerable violence, which lasted from fifteen to twenty-five days; after which they recovered the perfect use of their reason. It would, however, appear that it is only during the vigour of youth that the system is susceptible of the reaction which has been described, to any very salutary extent, since I cannot recollect more than one instance of a cure after the age of forty, during my official attendance at the Bicêtre.

"I may now presume upon the reader's acquiescence when I assert that paroxysms of active insanity are in some circumstances to be hailed as salutary efforts of nature to throw off the disease. It is only when periodical mania, whether regular or irregular, threatens, from the increasing violence and duration of the fits, to become fatal, or to degenerate into continued insanity, that we ought to seek the aid of powerful medicaments. The remedies, then, to be used are the bath, shower bath, opium, camphor, and other antispasmodics, whose efficacy appears to be agreed upon, but whose operation still remains to be elucidated, notwithstanding the brilliant theories of Dr. Brown."

Now, if the views of this sagacious and experienced physician (Pinel) be correct, and all my experience goes to prove their truthfulness, upon what principles do those persons profess to act, who at the very onset of the maniacal paroxysm (a certain proof of defective vitality, disturbance of the natural equilibrium between the nervous and vascular systems, or perverted nervous

energy), reduce the constitutional powers by excessive depletion (thereby diminishing the *vis conservatrix naturæ*), or tie down a furious and excited lunatic to a tub-bedstead, or a filth-engendering restraint-chair? If the disease be in reality a perversion, accumulation, or morbid tension of the "*vis nervosa*"—the animating principle of Dr. Calvert Holland—how can the patient, while thus "cabinéd, cribbed, confined," find a vent for the superfluous nervous energy? Whilst on the other hand, by allowing free liberty of motion, he may, through the medium of his extreme mobility (very like that observed in growing children, which you cannot, for your life, and ought not, if you could, repress), noisy vociferations, and great muscular activity, discharge the morbid tension of the nervous system, in like manner as the suffocating and intensely electric state of our atmosphere is dispelled by the thunder-storm. And thus those rancorous and revengful feelings ("often prompting fatal acts of revenge or despondency," now rarely met with in humane establishments), formerly engendered by the brutal employment of iron hobbles, strait waistcoats, and the dastardly assaults of cowardly and ruffian keepers (summoned from their beer and cards to quell that riot which vigilance might have prevented) would never be called into operation.

A writer in the British and Foreign Medical Review, for January 1840, whilst speaking of the halcyon days of iron hobbles and restraint chairs, remarks—"Many errors," observes Mr. Luke, "have arisen both in the construction and management of asylums, from an excessive attention to safety; and it has been made an excuse for much improper treatment, and for much vicious neglect, on the part of the attendants: he mentions a visit he made to a house for insane persons, in which security was made a primary object; and where he found three of the keepers in the middle of the day earnestly employed in playing cards. We think, indeed, that a pretty correct estimate of the general management of a lunatic institution may be made by observing the number actually under corporeal restraint. It is here as in a regiment: where severe punishments are frequent, the commanding officer will generally be found inefficient." The following remarks, taken from one of the Lincoln

reports, afford us an instructive lesson:—"If there is any secret in the management of the insane, it is this; respect them, and they will respect themselves; treat them as reasonable beings, and they will take every possible pains to show you that they are such; give them your confidence, and they will rightly appreciate it, and rarely abuse it." The whole history of past asylum management, and I have attentively perused many of the best reports of asylums throughout the united kingdom, clearly convinces me that the advocates of "the humane system of non-restraint and non-seclusion" have got truth, humanity, and justice on their side, and moreover they are acting upon the soundest physiological views of the nervous system; an occasional accident, or a case of broken ribs (for I never was a defender of cruelty) occurring either through neglect of supervision on the part of the chief executive officer, or a selection of attendants more on account of their thews and sinews, than good moral habits and sound tact, is no argument against the efficacy of the humane system: these matters are generally sought out with lynx-eyed vigilance by the few advocates now left, of iron hobbles and restraint chairs, these parties wholly forgetting the daily and hourly abuses, the privation, cruelty, murders, and fatal suicides which once characterized such establishments as the old York and Bedlam hospitals.

The Convulsive Theory of Mental Disorders.

The view which I have taken, of the active paroxysms of mania being in reality nothing more than true convulsive actions, having been strongly objected to by several members of the Medico-Chirurgical Society of Nottingham, and further investigation having only further confirmed, rather than weakened, my opinions thereupon, I take leave to offer the following remarks:—

Feuchtersleben, in his admirable work entitled "Medical Psychology" (Sydenham Society's translation), observes—"The nervous, like every other organic system, is a complete whole: every separation of it is arbitrary. It seems most to the purpose, as Marshall Hall proposed, that it should be made on physiological principles, and there is nothing objectionable in dividing it into

a vegetative (nutritive), motor, and sensorial system; or into a system of sensation, motion, respiration, and sympathy. Its relations to physical life, which is what we have to do with, seem to be most properly expressed by the grouping which we have adopted. The centres which unite the whole are, the cortical substance of the brain, the spinal marrow, and perhaps also the ganglia of the sympathetic system."

Now, my notion of the convulsive actions in mania is this:—the intellectual faculty, which has, or is supposed to have, its origin in the cortical substance of the brain, is functionally or organically affected: that is to say, the grey or cortical portion of the brain being affected, the intellectual faculty, as depending on a normal state of that portion of the brain, as a necessary consequence becomes disordered; the power or control which the reasoning faculty exercises over the remainder and subordinate portions of the nervous system is thus temporarily (or permanently, as the case may be) destroyed or lost, and the motor nerves, left to their own devices (as one may say), set up irregular and convulsive actions.

In like manner as a ship deprived of her compass, and disobedient to her helm, drifts on the stormy ocean, and is carried hither and thither, at the mercy of the waves—what the compass and the helm are to the ship at sea, such is the reasoning faculty to the human body. In confirmation of this view we notice in the violent struggles of the epileptic, during the state of unconsciousness, a convulsive action of the muscles, through the motor nerves acting independent of the influence of the will; but consciousness being restored, the mind having resumed its empire over the body, these convulsive actions cease: and the same thing obtains, though to a lesser extent, in all the neuroses, such as chorea, tetanus, &c. The *fons et origo mali* may lie in the nervous system, or in the vascular system, or in the assimilative or reproductive apparatus: no part of the human organism can, in truth, be dealt with independently of the rest; for like the old tale of the belly and its members, so exquisitely told by Shakspeare, a reciprocal interest binds together all the members of the community.

I protest against the narrow and contracted views of the nervous system

entertained by certain physiologists by profession, but not practitioners in medicine. Many barbarous and inhuman experiments have been made on some of the lower animals, which (to my thinking) have not enriched science one single iota: the book of nature lies open before us all, and certain facts are presented to us in ordinary observation of disease, which, if read aright, and submitted to the alembic of the mind, will afford all the information we require. My esteemed friend, F. D. Walsh, Esq., of the Lincoln Lunatic Asylum, in reply to an inquiry of mine relative to the convulsive theory, remarks—"I have not read your paper in the MEDICAL GAZETTE, and never heard of the convulsive theory before you mentioned it in your letter; but I think a great deal might be said on the subject. I have observed that there is always something convulsive attending a greater or less loss of consciousness: for instance, in epilepsy, where consciousness is entirely gone, the convulsions last until it returns; in maniacs, consciousness is entirely gone, inasmuch that there is sometimes no consciousness of their own identity, and they will call themselves kings, or what not. Now as in epilepsy there is a lesion that destroys consciousness utterly, and we have convulsions; so in mania, where there is a lesion that destroys consciousness partially, the acts of a maniac may be considered as partly convulsive; and even we see amongst men sane enough to be at liberty, habits akin to the convulsive odd acts of which they are scarcely conscious—laughing to themselves, &c. Is there not in such men some lesion or torpid state of the brain, in which a man is not sufficiently conscious of his own identity, or in the identity of surrounding objects; and, with a little more lesion, might, from the same cause, forget his identity entirely—think himself a king, or be incapable of the identity of surrounding objects—think an asylum a palace: and would there not be attending this lesion of the brain habits also akin to the convulsive, because convulsions will attend a partial loss of consciousness, from the same reason that they attend a total loss in epilepsy? But take facts: patients come to an asylum under some delusion; are not such men subject to habits which they cannot control, but which control them? All actions of

the voluntary muscles which are not under control have something of the nature of convulsions."

I may here remark, that it is my intention to investigate this subject still further, as one deserving the attention of those having the management of insane persons. After consulting the works of Dr. W. B. Carpenter on Physiology, and the practical writings of Drs. Watson, Henry Holland, Calvert Holland, and the "Further Inquiry concerning Constitutional Irritation," by that Nestor of surgery, Mr. Benj. Travers, I will, with the permission of the Editor, communicate the results in the columns of the LONDON MEDICAL GAZETTE.

Belper, South Derbyshire,
January 1850.

[To be continued.]

BED-SIDE SKETCHES.

By JOHN CHARLES HALL, M.D.

Fellow of the Royal College of Physicians, Edinburgh; Member of the Royal College of Surgeons, London; Author of "Remarks on the Treatment of some of the more important Diseases, including the principal Diseases of the Eye," &c. &c. &c.

"Concordiæ res parvæ crescunt."

[Continued from p. 244.]

No. III. IRITIS—continued.

a. *Treatment of acute iritis.*—A very few remarks will suffice to guide our selection of the remedies most serviceable in combating this fearful affection. Their effects will then be briefly illustrated by the details of one or two interesting cases.

When the patient is young and healthy, it will be necessary to bleed, and to bleed largely: the quantity to be taken must be estimated by the effect produced upon the system, always keeping in mind that one large bleeding will be far better than several smaller ones. Leeches, in acute cases of iritis, are worse than useless, and in my opinion ought never to be applied in the first instance, unless some peculiarity of constitution suggests the propriety of abstaining from general bleeding. In twelve or twenty-four hours it may be necessary to repeat the bleeding, but in the great majority of cases this will not be required: the bleeding should in the first instance be carried to the extent of

producing some decided and, if possible, permanent effect upon the circulation: subsequent to the general bleeding, cupping and leeches may be required, and will often be found useful. After bleeding, a full dose of calomel should be given. To a strong robust man, ten or fifteen grains of calomel may be mixed with a little table-salt, and put dry upon the tongue, and uncombined with any other purgative, for by such combination its useful effects are very often obscured and impaired: the full advantages of the remedy, according to our experience, being best obtained by the addition of a little salt only,—by putting it dry upon the tongue, and abstaining for some time from taking water or other fluids. This is a point of practical importance, and well worthy the attention of the practising surgeon and physician. It is a well known fact that the inhabitants of maritime localities, and sailors, after a long voyage, in which they have been deprived of the use of fresh provisions, and kept upon salt meat, are more liable than others not so circumstanced to the influence of mercurial preparations; which arises, in the opinion of Mialhe, from the bodies of such men containing large quantities of the alkaline chlorides,—so that there is more complete conversion of calomel into corrosive sublimate than under the usual state of the body.†

* We have already, in another place, ventured to lay before our professional brethren our views on the administration of calomel; the substance of which we venture to repeat. "Leaves from the Case-book of a Practising Physician," by J. C. Hall, M.D., *Lancet*, August 18th, p. 171.

† It is the opinion of Dr. Mialhe (*Traité de l'Art de Formuler, ou Notions de Pharmacologie appliquée à la Médecine*) that all the preparations of mercury used by us for medicinal purposes are, with or without the presence of atmospheric air, reacted on by the alkaline chlorides in solution; thus giving rise to the formation of corrosive sublimate, the quantity so produced depending in part on the quantity of alkaline chlorides which may be present, and also on the kind of mercurial employed. He states that he has found the deuto-mercurial compounds, by means of a double decomposition, at once produce their equivalents of the bichloride of mercury: this is not, however, the case with the protoxide and proto-salts of mercury: these are first formed into the proto-chloride, and then converted, by a subsequent process, into the smallest possible quantity of corrosive sublimate. He concludes, with other physicians, that all the various compounds of mercury produce the same series of physiological effects on the animal economy, differing only in degree, and depending, as Dr. Mialhe supposes, "on the quantity of the bichloride resulting from the use of the different salts of mercury." Lassaigne has also added to our former knowledge this important fact, that the bichloride of mercury forms a compound with

Children, and patients confined to a milk diet, support large doses of calomel, because the fluids in their alimentary canals are destitute, or contain only very small quantities, of the alkaline chlorides. Patients, also, who have lived for a long time on broth, or low diet, the fluids of whose bodies are also exhausted of chlorides, consequently bear large doses of calomel without the system becoming affected.

To Dr. Mialhe we owe, also, the explanation why calomel acts best as a purgative when put dry upon the tongue, with the addition of a few grains of salt: he says, "that the action of insoluble remedies must be inversely to the quantity of water administered with them;" and this he has proved by actual experiment. For example, if nine grains of calomel, nine grains of table salt, and the same quantity of muriate of ammonia, are put into seventy drops of water, there will be produced, in twenty-four hours, one-third of a grain of the bichloride of mercury. Place the same ingredients in a vessel, and add to them one hundred and forty drops of water—twice the quantity—and the result will be one-quarter of a grain of corrosive sublimate; but if we add to the same substances four times the quantity of water, one-sixth of a grain of corrosive sublimate only will be formed: "hence," writes Dr. Mialhe, "it is clear the purgative effects of calomel are lessened by taking a large draught of water immediately afterwards." The whole subject of the administration of medicines is fraught with much interest, and is one well worthy the attention of the medical profession in this country.

After a large bleeding, and the administration of a full dose of calomel, say three or four hours after the calomel, an aperient draught, containing sulphate of magnesia and a small dose of emetic tartar, will be useful in preparing the way for the administration of that remedy, on which alone the safety of our patient depends.

We may bleed, and bleed, and bleed again, but the bleeding will not cure iritis; it may, and doubtless does, re-

albumen insoluble in water, but soluble in the alkaline chlorides. Dr. Mialhe concludes that this soluble compound, consisting of an alkaline chloride, bichloride of mercury, and albumen, is found wherever the bichloride of mercury, or any other preparation of mercury, is given internally—that in this form mercury gains access to the circulation, and is carried over the body without sustaining any molecular change.

strain the inflammatory action, but if depended upon altogether, in the majority of cases the sight would be lost. Bleeding, and purging by emetico-cathartics, are, however, of the greatest advantage: they prepare the system more easily to submit to the influence of mercury, our only defence against the destroying powers of iritis. The object being to bring the system under the peculiar influence of mercury as quickly as possible, calomel, combined with a sufficient quantity of opium to prevent its being passed off by the bowels, is to be administered at short intervals. Say three grains of calomel and the third of a grain of opium every three hours, or a smaller dose may be given every hour. Where the object is to bring the system as rapidly as possible under the influence of mercury, according to our own experience, this is effected most quickly by giving a grain of calomel every hour. Sometimes the system will not take on a mercurial action until the bleeding has been repeated; and this should always be done where it is necessary speedily to obtain the mercurial influence: say, if the gums do not rise in the course of forty-eight hours, the bleeding, if not contra-indicated, may be repeated; and very often we have seen, after a moderate second bleeding, the system quickly yield to the specific effects of the calomel. Mercurial ointment and opium may also be rubbed over the eye-brows three times a day: this is a practice common in Germany, and it certainly very often removes the pain. We have spoken as yet of those cases only where our sheet anchor, mercury, may safely be administered; we shall presently have to speak of iritis occurring in patients where a large exhibition of mercury would be unsafe.

Few men in active practice can have failed several times a year to have witnessed the pleasing change which takes place in the eye so soon as the factor in the breath proclaims that the mercurial action has been established. First the disease appears stationary; no progress has been made in the work of destruction since our last visit; in a few more hours the zone of red vessels around the cornea is seen to fade; the drops of lymph next do not look quite so large; in a day or two they are clearly less; the iris again begins to look a little more like itself; the pupil is not so distorted and puckered; the

perfect circle is slowly formed once more; and, at length, the patient and his friends have the pleasure of finding the eye restored to its original state of beauty, perfection, and usefulness, although some weeks may elapse before this is accomplished. Such will be the termination in recent cases of iritis, and even in others more severe, that have been longer in progress before the proper means have been made use of: although the progress is slow, useful vision is often restored, even when the eye may not always become so perfect as before. But in all cases, so soon as the mercurial influence is established, the absorption of the exuded matter is beautifully seen. When matter has only been exuded recently, it quickly vanishes; but that which has become organised into adhesions has to undergo solution by a retrogressive metamorphosis before it is fitted for absorption, and consequently it is some time before it disappears. In other cases the iris remains thickened from exudation into its substance, which is never removed.*

It was stated in the former part of this paper† that the introduction of light in the first instance often caused the pupil to be fixed in a contracted condition by the effused lymph: the artificial dilatation of the pupil is, therefore, always a matter of great importance; and in addition to the plan of treatment already pointed out, either a watery solution of the extract of belladonna is to be dropped into the eye, or, moistened with water, the extract is to be rubbed in a circle surrounding the eye and eyebrow, and upon the eyelids.

Belladonna acts by contracting the iris, and consequently dilatation of the pupil follows. When the iris is perfectly healthy, contraction and dilatation of the pupil manifest its activity,—contraction of the circular, dilatation of the radiating fibres of the iris. The action of belladonna in producing dilatation of the pupil would seem to be the result of calling forth, through the medium of the ganglionic system, the contraction of the radiating fibres. These fibres, from what we stated in our last paper,‡ the student will re-

member are under the immediate influence of the ganglionic system. Mr. W. Jones thinks it probable that the action of belladonna in producing dilatation of the pupil probably consists in exciting, through antagonistic reflex action, the nerves of the radiating fibres of the iris, by exerting its sedative influence on the retina* (p. 96).

November, 1842.—Mr. ——— requested my attendance. He was suffering from an attack of acute iritis in the right eye. The disease had existed two or three days. He complained of very great pain in the eye, and the whole of the right side of the face. No cause could be assigned for the attack: it had come on suddenly. He had taken one or two doses of opening medicine; but the pain increasing, and the sight getting more dim, he thought it right to obtain advice.

An examination of the eye exhibited the existence of active mischief going on in the organ. The usual symptoms of iritis were present; the pupil was contracted and irregular, and, upon the surface of the iris, deposits of lymph could clearly be detected.

He was ordered to be largely bled; the extract of belladonna to be applied all round the eye; mercurial ointment, with opium, to be rubbed over the eyebrow; and the system to be brought as rapidly as possible under the influence of mercury.

This case most beautifully exhibited the wonderful effects of mercury over iritis. In a very short time proof was afforded that the disease was arrested. The mercurial action once established, the pain grew less and less; and, in from fifteen to twenty days, a great portion of the effused lymph was absorbed. He could now see the window, and other large objects; and in the end recovered most perfectly the sight of his eye.

When the system was brought suffi-

* It was suggested by a medical friend, that as "opium has the peculiar and almost characteristic effect of greatly contracting the pupil, when taken in poisonous doses, a suspicion might arise that only one set of muscular fibres were to be found in the iris,—viz., the radiating, and that the circular fibres were not muscular, but elastic." The effect most probably arises from the greater sensibility of the retina to light producing a reflex powerful contraction of the circular fibres; and although this may not always be manifested, yet the optic nerve and the third pair may reasonably be supposed to act as a spinal compound nerve, without the necessary intervention of consciousness. The non-contraction of the pupil after death is proof that the fibres are muscular, and not elastic.

* Parenchymatous inflammation of the iris is only a more intense form of inflammation, in which a rapid exudation of lymph takes place, both on the surface and into the substance of the iris.

† MEDICAL GAZETTE, Feb. 8th, p. 242.

‡ Ibid. p. 242.

ciently under the influence of mercury, the doses of the remedy were diminished, but not altogether withdrawn; for it must be remembered that although, to use the words of Mr. Lawrence, "rapid salivation cuts short iritis like a charm,"—still, so long as the redness continues, until the natural colour of the iris is restored, and the whole of the lymph has disappeared, it is necessary to keep up the most gentle action of the remedy, and some weeks may elapse before, as in the case just narrated, the patient can be considered cured.

β. *Chronic iritis*, that disease which sometimes remains after the first ravages of acute iritis have passed away, is not here indicated. There is a distinct form of iritis which, from the slowness of its growth, the mildness of its symptoms, and the length of time it continues, may be termed chronic. In acute iritis the disease may be established in a few hours; but in this form days may pass away, and little apparent progress be made. The peculiar zone of red vessels is less visible, and appears interrupted, and the other symptoms of acute iritis, though present, are not so distinct, and the power of vision is less impaired; but, if suffered to run its course, by degrees the organ will become imperfect; and so slowly and insidiously does the disease creep on, that the eye may be all but lost before the patient has discovered that anything very serious is the matter.

It not unfrequently happens that some patients are repeatedly affected with slight attacks of iritis, which in the end either destroy altogether or seriously injure the sight of the eye, rendering its transparent structures opaque and muddy. We recorded such a case in the pages of this journal so long ago as the year 1842. The indications for treating this form of iritis then pointed out, and which subsequent experience has confirmed, are—1st, to subdue the inflammatory attack; 2nd, to ascertain, and if possible to remove, the peculiar state of the constitution on which it depends, and at the same time to take care that the patient does not use the eye in any way tending to injure vision, such as reading by gas-light, &c.; 3rd, by establishing some permanent counter-irritation,—a seton, or a blister in the nape of the neck,—to preserve the eye from renewed attacks of inflammation.

It is a curious fact, nevertheless: one supported by abundant evidence, that the chronic form of the disease is common in certain families. Mr. Middlemore is acquainted with several families, the brothers and sisters of which are blind from relapses of chronic iritis: "three brothers and two sisters in one family have lost all useful vision from relapses of this disease, and the oldest of them is not more than fifty years of age."

In chronic iritis, as in its more acute forms, there is a tendency to destroy vision by the effusion of lymph, and therefore the inflammatory action must be extinguished by bleeding and mercury, in some form or other: it will not, however, be necessary to prescribe the same active treatment; indeed, in many constitutions in which this form of iritis is observed, it could not be borne, and the object seems best attained by moderate bleeding, general or local; by keeping the pupil dilated with belladonna, and gradually obtaining the mercurial influence, either by doses of blue pill and opium, Hydr. c. Cretâ, and Dover's powder, or small doses, twice a day, of the bichloride of mercury, in tincture of bark. A blister should be applied behind the ears, or to the nape of the neck, and some form of counter-irritation kept up for some months. We have seen advantage from the exhibition of two grains of the iodide of potassium in some mild bitter infusion two or three times a day.

Mr. Tyrrell, speaking of this variety of iritis, has remarked that the disease sometimes commences in the way already described, but very frequently it is induced "by reducing the acute disease, by *antiphlogistic means*, without the aid of mercury." It often happens, that when the redness and the pain are removed, the patients think themselves cured; but although the vision has improved, if mercury be not still persevered with, this sub-acute form of inflammatory action still continues, and will go on to the destruction of the organ.

After an attack of either acute or chronic iritis, should the eye appear weak, and the vessels of the conjunctiva remain in an enlarged and atonic condition, the eye may be bathed with a weak solution of the *vinum opii* and water—with a weak solution of nitrate of silver (half a grain to an ounce of distilled water, — into

the eye two or three times a day), or, what sometimes answers better still, with a lotion of the lapis divinus.*

[To be continued.]

CASE OF
IDIOPATHIC TETANUS TREATED
BY GALVANISM.

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Fellow of the Royal Medico-Chirurgical Society,
late Medical Officer to the Birmingham Lying-in Hospital.

J. T——, æt. 12, by occupation an errand-boy; of a scrofulous diathesis. Has not suffered from any disease prior to present attack, but has been constantly liable to a sensation of stiffness in his joints, and more particularly in the back, after exposure to cold. Parents healthy. Has several brothers and sisters, all of whom enjoy a good state of health.

History of the present attack.—On the 9th July, 1849, being a very hot day, he walked the distance of ten miles and back very rapidly, after which he felt much fatigued; and, before the body had cooled down to its natural temperature, he went into the water for the purpose of bathing, and remained in for two hours. At night he went to bed, feeling much as usual, with the exception of a sense of great stiffness in the legs and thighs. Next day this much increased, and extended to his back and loins, and more particularly the abdominal muscles. This feeling

of stiffness, which was no doubt caused by excessive exertion in walking, was accompanied by constipation, to relieve which his mother administered a quantity of salts and senna to no purpose. On the 11th she repeated the dose much stronger than the day before, with a satisfactory result on the 12th; but by this time the stiffness had passed into a general rigidity of all the voluntary muscles. His jaws were partially closed; violent pains of a spasmodic nature seized his bowels; a series of convulsive movements attacked the whole system. In this state he remained during the whole of the 13th. On the 14th, at his own request, I was called in to visit him, when I found him in the following condition. He was lying in bed upon his back, with extreme opisthotonos; legs stretched out perfectly rigid and cold; abdomen prominent, and so hard that percussion gave the sensation of striking a deal board. The mouth was nearly closed, admitting only the blade of a knife. Such was the rigidity of the muscles that he had very little power to raise his hands to his mouth. Pulse 140; bowels not relieved since the 12th. Every ten minutes he was seized with violent tetanic convulsions, which gave him excruciating agony, causing from time to time forcible closure of the jaws, which produced fearful laceration of the tongue.

Treatment.—The bowels were in the first place freely acted upon by three minims of croton oil, which were introduced into the mouth through a vacancy caused by the extraction of two teeth. After this, opium was administered by enema, and by the mouth a drachm of tincture of opium. The abdomen was enveloped in hot flannels, hot water was applied to the feet, and a mustard cataplasm along the whole course of the spine.

July 15th.—No improvement. Pulse quite as rapid. Convulsions much the same. Bowels not relieved since yesterday. Urine scanty. A stimulating mixture, with half a drachm of tincture of opium for a dose every three hours; another enema similar to the one of yesterday, Brandy, gruel, and beef-tea, to be sucked in through the teeth as often as convenient.

16th.—Passed a bad night. Convulsions as frequent and strong. Pulse

* *R. Argemina, Aluminis, Nitratis Potassæ, aa. partes xvj.; Terantur simul et liquefiant in vase vitreo in balneo arenæ; Liquefactis, adde Camphoræ tritæ partem j.; Misce, massa refrigerata servetur sub nomine Lapidis Divini.*

R. Lapidis Divini, gr. xij.; Aquæ Distillatæ, ℥j.; Misce et cola. Colaturæ adde Vini Opii (ætas Aromat.), ℥j.; Aquæ Rosarum, ℥viij. Misce, ft. lotio.

When it is wished to make use of this lotion, a small cup may be filled with it, so high as to allow the addition of a sufficient quantity of boiling water to make the whole new-milk warm, and with this the eyes may be bathed frequently.

In applying drops, their contact with the conjunctiva of the eye-ball and upper eye-lid should be provided for. Gently evert the lower eye-lid, and with a camel's hair pencil, dipped into the drops, touch its inner surface; if the surgeon do this, the lotion will immediately be diffused over the whole of the lower half of the conjunctiva. By carefully drawing the upper eye-lid from the eye-ball, and then moving it up and down, the lotion will be applied to the upper part of the eye also.

190. Bowels not acted upon. Great difficulty in swallowing, in consequence of the soreness of his tongue. Complaints of excruciating pains in the legs and back. The mixture of opium was continued every three hours as before; an enema of castor oil and turpentine was given; and mustard cataplasms were applied to the soles of the feet. The abdomen was ordered to be well rubbed with brandy, and the following pill to be taken at nine o'clock P.M.:—
 Ft. Morph. Hydroch. gr. $\frac{1}{2}$; Hyd. Chlorid. gr. iv. Beef-tea and brandy gruel as heretofore.

17th.—Has slept a little in the night, but was very frequently disturbed by the paroxysms of convulsions, which vary but little in their strength. The urine, which heretofore has been passed in a small quantity at a time, and high coloured, is to-day almost entirely suppressed. Bowels not relieved since the enema of yesterday. Appetite very bad: will take nothing but a little tea. He was ordered a saline diuretic mixture every three hours, and three grains of calomel to be taken directly, and repeated in three hours if required.

This day (the 17th) I administered several rather strong shocks from an electro-galvanic apparatus; first along the spine, then over the masseter muscles, and then in the course of the great sciatic nerves. This appeared to cause great pain through the whole system, and at first brought on the convulsions much stronger. The opium was discontinued altogether. In the course of a few hours he appeared more calm, took a mixture of beef-tea and brandy, and, the bowels not being acted upon in the evening, I prescribed another enema of castor oil and turpentine.

18th.—Has passed a better night. Convulsions less frequent. Has passed more urine. Bowels relieved. The galvanism was again administered; and, in giving a shock in the course of the great sciatic nerve, he moved the right leg, and afterwards said he could for the first time feel it. A short time after its administration to-day, to the surprise of his friends, he got up in the bed and asked for something to eat; but, before it could be procured, he fell back as rigid as heretofore. I ordered the abdomen and legs to be again well rubbed, a blister over each masseter muscle, and on each side of his spine over the region of the cervical plexus.

19th.—Has slept better; convulsions less frequent; has taken more nourishment. Pulse small, feeble—120. Bowels relieved. The blisters having risen, I applied galvanism over each masseter muscle, and over the blisters on the spinal column; ordered the blisters to be kept open, and brandy, gruel, beef-tea, or port wine, to be administered when an opportunity occurred, and a blister to be applied over loins.

20th.—Has passed a better night, the paroxysms having occurred only twice during that period. Can open his mouth wider, and has eaten a small piece of pudding. Bowels constipated. Galvanism to be applied over the same parts as yesterday, and, in addition, on the blisters in the lumbar region.

21st.—Has passed a good night, not having had more than two convulsive fits since yesterday morning. Can raise his legs, and slightly move his back; can open his mouth wider. Bowels constipated, and still very hard. Has masticated a little chicken. Ordered him Ol. Ricini, $\mathfrak{ss}$. to be taken directly, and Quin. Sulph. gr. ij. to be put upon the tongue every four hours, and the galvanism to be applied over the same parts as yesterday.

22d.—Continues improving. To continue the same treatment as yesterday.

23d.—Much better. The bowels have acted spontaneously. Has slept well, and had but one convulsive fit in the course of the night. Can masticate his food. Ordered him out of bed for two hours, and to continue medicine and galvanism as before.

25th.—Much better. Can stand on his legs with a very little support. Continue medicine and galvanism.

27th.—Much better. Bowels softer. Pulse between 80 and 90, and stronger. Bowels continue to act without the aid of medicine. Ordered him to continue the galvanism, and to take a tonic mixture of sulphate of iron and quinine.

30th.—Has been out for a ride. Appetite very good. Can masticate his food well. Has had no convulsive fits for the last two days. Pulse 80; and strong.

August 7th.—Is able to walk about as usual, with the exception of complaining of great weakness of the legs and soreness of the feet. Has discontinued all medicine.

From this time he daily improved, having no return of the convulsions,

and, by September 1st, was able to follow his usual avocations.

The chief interest of this case consists in the support which it affords to the humoral view of the pathology of tetanus put forward by Dr. Todd in the *Lumleian Lectures*, published in the *MEDICAL GAZETTE* last year, and in the influence of galvanism in reducing the tonic convulsions.

As in many other cases of idiopathic tetanus, the disease seemed to originate in exposure to cold, and a sudden check to the perspiration,—causes very favourable to the deprivation of the blood.

The great exertions which the patient made in walking would, no doubt, largely contribute to determine the influence of any morbid matter accumulated in his blood, upon the muscular and nervous systems.

The application of galvanism,—a mode of treatment suggested some years ago by Professor Matteucci, of Pisa,—seemed to have a very beneficial influence. It was administered on the seventh day of the attack, when the disease was quite at its height: immediately after its application, the symptoms began to abate, and the rigidity of the muscles and the convulsive attacks diminished steadily each succeeding day; and it is worthy of notice, that simultaneously with the application of galvanism all opiate medicines were discontinued.

Newport Pagnel, Bucks,
Jan. 1850.

CASE OF PLACENTAL AND FOOT PRESENTATION.

By THOMAS BOURNE, Surgeon,
Radstock, near Bath.

Mrs. F., aged 42, has had eight children, three of whom only are living. She has generally had pretty good times. Her last labour was attended with considerable hæmorrhage, which left her weak for some time.

About a month ago (being the seventh of pregnancy) she was alarmed by a sudden discharge of blood, which, however, soon subsided, and she was tolerably well until the morning of Feb. 5th, when labour pains came on. These continued at irregular intervals during the day, and in the evening the waters broke, when I was sent for. On examination,

I felt a foot and a portion of the placenta near the margin of the os uteri, which was soft, but not greatly dilated. I gave Mrs. F. fifty drops of Tr. Opii, and left her; directing the nurse to send for me when the pains became more regular and frequent.

Between 5 and 6 o'clock on the following morning my attendance was requested. I found my patient sitting near the fire, and she told me that blood gushed away with every pain. I immediately advised her to go to bed. On a second examination I found the os more patent, and a considerable part of the placenta separated from its border. I now carefully attempted to bring down the feet, but could only succeed in reaching the one which presented. Having made several fruitless efforts to find the other, I contented myself with the one in hand, and made gentle traction during several pains, hoping that the breech would soon follow. In this, however, I was disappointed. I gave a dose or two of Tr. Secal. Cornut., but no progress was made. Mrs. F. was now in a critical state: the hæmorrhage was very profuse, and the pulse and countenance too plainly indicated that the powers of life were giving way. Being convinced that the breech could not descend, I carefully introduced my hand, and removed the placenta, when the hæmorrhage soon subsided, and the child (which had evidently been dead some time) was expelled in about half an hour.

The feet were wrapped in warm flannel, and steady pressure was kept up on the uterus for two hours, when my patient was bandaged and put to bed. The diet consisted of tepid gruel with brandy.

Mrs. F. has since progressed very favourably.

REMARKS.—This case is an additional one in favour of Dr. Simpson's practice of bringing away the placenta when it presents. Nature and art strove in vain to deliver the child so long as the obstruction remained. That being removed, the labour was soon completed. The hæmorrhage was very great, but it soon subsided after the placenta was separated.

These cases are very perplexing to the medical practitioner, and demand all his vigilance, judgment, and care, to bring them to a happy *dénouement*.

February 1850.

THE ALLEGED
EMPLOYMENT OF CHLOROFORM
BY THIEVES.

By JOHN SNOW, M.D.

In two recent cases of robbery it has been asserted that chloroform was used to render the victims insensible; and although no real evidence has appeared of such having been the fact, yet the statement has gained great publicity through the newspapers, and the sentences on the prisoners have apparently been rendered more severe by the allegation.

It can readily be shown that if thieves and prostitutes were to resort to the use of chloroform in the public streets, in the manner alleged, the attempt would only lead to their instant detection on the spot. The sensation of pungency in the nostrils and throat that is caused by this agent, when its vapour is in sufficient quantity to produce any effect on the sensorium, is so strong and peculiar that no person can take a single inspiration without being aware that he is inhaling something very unusual. Chloroform, in fact, can never be administered without the consent of the party taking it, unless by main force, which has to be used in the case of children who are not old enough to be reasoned into taking it. If a child be asleep when the process of inhalation is commenced, it nearly always awakes before being made insensible, however gently the vapour may be insinuated. As breathing is perfectly under the control of the will, a person would, on finding such a strange attempt being made on him in the public street, instantly hold his breath, and use all his powers of resistance to repel the assault. And supposing the handkerchief, which is the alleged weapon, were held forcibly over his mouth and nostrils, in spite of his efforts, yet he would be able to struggle as long, whilst holding his own breath, as if another person were trying to prevent his breathing by the method called Burking. When it is recollected that a race of 150 yards can be run in one breath, these struggles, it will be perceived, would last long enough to attract a crowd.

It is not difficult to understand how the report of the above use of chloroform first gained currency. The first

accounts of the use of this agent in surgery and midwifery which appeared in all the newspapers contained a description of its fruity odour and its administration on a handkerchief, but nothing was said of its pungency. Hence many persons, as I had experience, entertained the opinion that it might be used for effecting robberies. By and by, as it was reported, a person who had fallen down in the street thought, on coming to himself, that he recollected something of a handkerchief being applied to his face, and the insensibility from which he had just recovered was attributed to chloroform. It is most likely, if this was anything more than the ingenious invention of the reporter, that the individual in question had taken a fit. The paragraph, however, was a very suitable one for quotation; and the idea having gained general credence, it is probable that we shall often hear of it, as prosecutors who have to account for being in disreputable places and company, instead of the usual excuse of having been dining out, will try to remember something of a handkerchief.

I do not wish to apply this explanation to the case tried last week at the Old Bailey, and I cannot explain how the prosecutor got to the room of the prisoners, but I wish to state very distinctly my conviction that it was not by means of chloroform, and that, if anything was administered on a handkerchief in Whitechapel, it must have been some agent unknown to medical men, and which, if the police could discover it, would probably be of great service to humanity in the hands of legitimate practitioners. In the case tried on Saturday at the Surrey adjourned sessions it is given in evidence that the prisoner suddenly passed a handkerchief across a man's face in the street: they afterwards went into a public-house, and were seen there by a policeman drinking together. The man after this became insensible, and was robbed by the prisoner. The insensibility is attributed to chloroform on the handkerchief, which was suddenly passed across the man's face before he went into the public-house. This every one at all acquainted with the effects of that agent will perceive to be impossible.

Frith Street, Soho,
Feb. 11th, 1850.

MEDICAL GAZETTE.

FRIDAY, FEBRUARY 22, 1850.

Of late a disposition has been shown to find fault with the management of the Royal Medical and Chirurgical Society; but until now the complaints have not assumed a sufficiently distinct form to admit of answer, or probably some official notice would have been taken of them. But as this Society, among the most eminent in Europe, should not rest under a suspicion of mismanagement, we have taken upon ourselves to inquire into the correctness of the charges which have been brought against it.

The complaints now resolve themselves very much into the following:—A general want of excellence in the papers published—caprice in their selection—an attenuated volume—an obnoxious bye-law—and favouritism in the choice of the Council. The answer to the first objection is, that it is obvious the Council can only deal with the materials which it possesses; and that if papers of a higher character are not furnished, the Council cannot publish them. But at the same time let any candid person look over the last five volumes of the Transactions, compare them with the Transactions of any other Medical Society, and then say whether they would suffer by the comparison. In our opinion his verdict would be in their favour: they would not suffer by such a comparison. Again, it is alleged that some papers which the Council have declined to publish were really superior in merit to others which were published:*

* The last number of the *Journal of Medicine* sets forth some of the complaints which are made, and we will refer to others. "The attenuated volume of Transactions last issued, the inexplicable want of discrimination or justice displayed in the selection and rejection of pa-

this is possibly true; but does the admission prove that the Council have acted capriciously? We think not, and for the following reasons:—The bye-laws "direct that twenty-four referees of papers shall be selected by the Council from among the fellows. The standing orders provide that a fourth of this number shall be changed annually, and that the names of the referees shall be suspended in the Meeting Room, and printed in the Transactions. There they will be found. Let any unbiassed person look at the list, and say, are they honourable men? are they able men in their profession?

The referees are divided into sections—Anatomy, Medicine, Surgery, Obstetrics, Chemistry, and Materia Medica. To one of these sections every paper read before the Society is referred, to report upon its fitness for publication in the Transactions. Two reports at least are obtained in each instance, and in case of difference the opinion of a third is taken. An abstract of the paper is read to the Council: the opinions of the referees are read, and a ballot is taken. Can any system of dealing with the question promise fairer or more equitable results? We are informed that it has rarely happened that the decision of the Council has not been in accordance with the decidedly expressed opinions of the referees. We would ask those who object to this system, whether any fairer or better plan, or one less open to objection, could be devised for deciding on the propriety of publishing a paper?

If under such a system of ascertaining the fitness of a paper for publication, there should occasionally be a seeming wrong done, can any other conclusion be come to than the obvious one, that all human arrangements are fallible, and that it is impossible by any rules to satisfy all parties?

pers," and a violation of the Charter by means of a certain bye-law, are the main complaints there published.

Then again, the *size* of the last volume has been seized upon as a proof that the Society is declining; but what can be said of the previous one? Surely five hundred pages are enough. In what some persons would regard as the best days of the Society, it has sometimes happened that only a part of a volume has been published.

So far, as to general "want of excellence," "want of discrimination and justice," and "attenuation." Now for the charge on which the objectors lay much stress as the cause of all else—the quasi illegal bye-law.

It is true that the Charter directs that the Fellows shall assemble on a given day and proceed to ballot. It is equally true that the Council prepare "balloting lists," which they *do not* impose on a single Fellow, and therefore do not violate the Charter; for he is free to choose as he likes. But supposing the Fellows to act upon the *letter* of their Charter, that "they assemble and proceed to ballot *without premeditation and without concert*," is it likely that the result would be *advantageous* to the Society? and if there be *premeditation*, is it likely that *private meetings* or *cavassings* would produce results as satisfactory to the Society at large, as the deliberate consideration given to the subject by the Council, formally convened for the purpose? Would the "call of the President upon any of the assembled Fellows, to nominate suitable individuals," be attended with better results?

In making out the list, the "standing orders" require that "in the nomination of officers and other members of Council, regard shall be had to the following qualifications. "Seniority, contributions to the Transactions; distinction for works of merit, high professional character; and for Secretaries and Librarians, *special fitness*." We have reason to believe, that these matters are all fairly considered, and unless for spe-

cial and sufficient reasons, the senior Fellow is chosen.

As to the charge of caprice, then, it is a fair question whether in the selection of the Council in the list of ordinary Councillors, seniority has not been the ruling principle? And, with respect to office, fitness combined with seniority?

Again, it has been made a charge that there is injustice done to the Fellows at large by hospital cliquism. And yet what is the fact? If we look through the lists of the last five years, we shall find that from eight to nine out of the twenty-one were not hospital officers!

Again, it is attempted to hang something upon the fact that the two Secretaries retire at the same time. It is no doubt an inconvenience; but have the Council any right to tell those gentlemen that the Society has a more urgent claim upon them than their own personal convenience? According to our information, it is an error to assert that no solicitations to retain office have been made by the Council.

The same state of things might have occurred with the Treasurers. The Medical Treasurer retires, we are sorry to say, from ill health; and we understand, too, that the Surgical Treasurer was desirous to retire, but was prevailed upon to continue pending the completion of the arrangements for the premises.

Our readers will then, we think, agree with us that the charges are not proven; but we are not among those who think that the Society is to sit with its hands folded, and not advance with the times. Something may be done to improve the machinery of publication, and we hear that the subject has been under consideration; but the Society may do more than this.

We have long felt that this, probably the most important Medical Society in Europe, should make a step in advance; and we avail ourselves of this opportu-

nity of expressing our opinion. There is no reason why it might not be made to occupy a similar position in regard to the government, to that held by the Académie Nationale de Médecine. It might be their adviser on all medical questions, though not immediately; for governments in this country—we write it with regret—lose no opportunity of showing what a low estimate they entertain of our profession, and how much better a medical question can be settled without than with the aid of medical knowledge!

The Society should offer *prizes* for investigations in Medicine and Surgery: this would indicate the subjects most requiring investigation, and the successful papers might be published annually in the Transactions.

It may be said, young men only will compete, and the papers will have small value: but why should this assumption be made? Have not a Hodgson, a Samuel Cooper, a Swan, and other men of deservedly high reputation, competed for the Jacksonian prize? Have not able men competed for the College and the Fothergillian prize, and why should not equally good men offer themselves as candidates for the prizes of the Medical and Chirurgical Society?

As the Society is about to obtain the whole of the premises in which they at present have apartments, some further conveniences should assuredly be offered to the Fellows.

With a matchless library, and the élite of the profession as Fellows, all that is necessary to maintain the proud preeminence which this Society has attained is, that it should advance wisely with the times; and, though like the Sun there may be some spots on its surface, yet if it be only true to itself it will suffer no declension in the judgment of those whose good opinion is really valuable.

Reviews.

Further Observations on Chloroform in the Practice of Midwifery. By E. W. MURPHY, A.M., M.D., Professor of Midwifery in University College, &c. Pamphlet. 8vo. pp. 43. London: Taylor, Walton, and Maberly. 1850.

DR. MURPHY is one of the few obstetric practitioners of eminence in London who has uniformly given his support to the employment of chloroform in midwifery practice. His advocacy of this anæsthetic agent in the medical journals, at the meetings of medical societies, and in independent publications, shows that the charge of prejudice brought against the whole tribe of London practitioners is not strictly true. Dr. Murphy's name carries with it weight, and is sure to command the respect even of those who may be conscientiously opposed to his views.

The essay before us is a continuation of those inquiries regarding chloroform instituted by the author in 1848. The questions here examined are:—

“1. Whether chloroform interfered with the action of the uterus during labour? 2. Whether the safety of the child was hazarded by its administration? 3. Whether any ill effects subsequently manifested themselves by which the safety of the patient was compromised?”

The number of cases in which chloroform was used, and of which the author's experience is here recorded, amounted to twenty-one, of which thirteen were cases of difficult and protracted labour, attended with great intensity of suffering, and eight were cases of natural labour.

In the cases of natural labour we are informed the chloroform was given only when the suffering became so great as to overcome the patient.

“In all these cases of natural labour the patients were conscious: they slept in the intervals between the pains, and were only disturbed by their return. In the two last cases they continued to sleep, or, I should rather say, to be unconscious, while the child was being born. They groaned, and seemed to aid the expulsive effort, but gave no expression of suffering, and did not know when the child was born. In every instance the uterus contracted after delivery with its usual power, and expelled

the placenta. The subsequent recovery of each patient was rapid, and remarkably free from all those after-pains and restlessness that are so often observed after delivery. In one case alone mammary abscess occurred on the fifth day; but there was quite sufficient cause for its appearance, without the aid of chloroform."

Without entering into details, or quoting the views of other obstetricians referred to by Dr. Murphy as corroborative of his own, we shall at once give the author's conclusions on that *versata questio*, the effect of chloroform on the uterus. Dr. Murphy concludes:—

"1st. That chloroform does not impair the contractile power of the uterus, neither does it interfere with the action of the uterus, unless it be given in very large doses, or that the patient be highly susceptible of its influence.

"2nd. That the full anæsthetic effect of chloroform may be produced without paralyzing the uterus. The intervals between the pains may be lengthened, or the pains may be suspended, without any loss of power. On the contrary, in such instances, the moment that chloroform is withdrawn, the uterine contractions instantly return with increased force and efficiency. The renewal of the uterine action may occur when the patient is under the influence of chloroform.

"3rd. Whether the action of the uterus be temporarily suspended by chloroform,—whether it be increased or not interfered with,—in every case where the patient had previously suffered agonising pains, and her labour was making an unfavourable progress, chloroform has produced a most salutary change in restoring the proper action of the uterus by which labour was brought to a happy conclusion.

"4th. Those effects that indicate want of power in the uterus,—viz. great protraction of labour, hæmorrhage, retained placenta, &c., have not been proved to be the results of chloroform; on the contrary, where some of these conditions have been observed, there were causes present quite adequate to explain them independently of chloroform.

"5th. That degree of etherisation which removes the intensity of pain, without interfering with consciousness, does not interrupt the action of the uterus."

The question, whether the safety of the child is hazarded by the administration of chloroform is thus answered:—

"A sufficient number of cases have been recorded to put this question to the test of proof; because it is very obvious that, if

such were its effect, it must be at once noticed by the great increase of infant mortality; and yet, in 540 cases of natural labour, in which either chloroform or ether had been used, not a single child's death is reported; in 179 of these chloroform was inhaled. In 79 cases where different operations were performed, 20 being perforations, the deaths of children were 28, or, deducting perforations, only 8. Eight deaths in 59 cases, or 1 in 7, is rather less than the average infant mortality in forceps operations, which is about 1 in 4 cases."

Lastly, what are the effects on the mother? Is her safety compromised?

"The writer has not met with a single case where the inhalation of chloroform was followed by coma, convulsions, or other ill effects, described as the necessary consequences of its use; and, notwithstanding what has been so boldly asserted, he has not the smallest hesitation in saying that *there is not a single case of labour on record where chloroform or etherisation was the cause of death*. All those deaths which have occurred from the use of this agent were the results of its administration, or rather mal-administration, in surgical operations,—cases in which the risk of accident is greatly increased, because a more powerful dose is always required than need ever be given in midwifery practice. It is necessary that the patients be not only insensible to pain, and unconscious, but perfectly still: the patients are brought to the very verge of the precipice, and a very little want of caution would very easily throw them over it. In the practice of midwifery they need not be brought near to it."

Dr. Murphy does not deny that chloroform may occasion the death of a parturient woman; but, owing to the vagueness with which the cases of its alleged fatal action have been recorded, he disbelieves them.

The author considers that in midwifery practice chloroform should be used only in moderate doses. The dose should be such as "to remove sensation without destroying consciousness." A very small quantity of vapour will accomplish the desired object, and there is no necessity for doing more. "Its obstetric use differs in this respect essentially from that in surgical practice."

In operative midwifery a more powerful dose is requisite. The author prefers the inhaler of Dr. Snow to the plan of administering chloroform by a handkerchief, which he regards as unsafe.

"The writer having given the subject of *anæsthesia* his best attention, he feels perfectly assured that chloroform neither impairs the contractile power of the uterus, nor injures in any way either the mother or the child; and that, if ordinary caution be used, and if the administrator is conversant with the properties and the effects of the agent he is employing, there is no risk whatever in the administration of chloroform; but, at the same time, it must be understood that these conditions are absolutely essential. The closest attention should be paid to the manner in which the influence of chloroform is developing itself, and equal care should be given to the quality of the chloroform that is used."

We have given this brief analysis of a pamphlet on a subject which has excited a violent controversy; and from it we believe our readers will be able to gather the views of a disinterested and experienced London practitioner in favour of the use of chloroform. The rule of *audi alteram partem* is only fair; and we may remark that Dr. Murphy has discussed the subject with good sense, and in a very temperate manner.

Annals of Anatomy and Physiology.

Conducted by JOHN GOODSIR, F.R.SS.
L. & E. Prof. of Anatomy, &c. in the University of Edinb. No. I. Feb. 1850.
Edinburgh: Sutherland and Knox.
London: Simpkin and Marshall.

WE agree with Professor Goodsir in thinking that the advances made of late years in Anatomy and Physiology have been so great as to render a periodical, specially adapted to the record of progress, absolutely necessary. With this view it is proposed to publish a number of these *Annals* quarterly. The articles will be strictly confined to Animal and Vegetable structure and function, but will include Morbid Anatomy and Pathology. It is intended that the Journal shall be essentially British in its character; but translations of foreign memoirs, or papers of special anatomical or physiological interest, will be occasionally inserted. There will be a quarterly bibliography, and a retrospect of the Proceedings of Societies, &c. in reference to Anatomy and Physiology.

Such an undertaking deserves, and will no doubt receive, support. The present number contains papers of considerable interest, many of which are profusely illustrated with lithographic drawings and wood engravings. The

articles in the present number are—1. On the *Muscular Structure of the Tongue*, by Mr. Zaglas; 2. On the *Anatomy of the Forbessia*, a large polype-like animal found in Baffins Bay, by Mr. H. Goodsir; 3. An account of Some Monstrosities, by the late Dr. Reid; 4. On the *Structure of the Glands of the Alimentary Canal*, by Dr. A. Thomson, a most valuable contribution to Structural Anatomy; 5. A paper on the *Refracting Power of the Eye*, by Prof. Forbes; and 6. The Substance of an Inaugural Dissertation on the *Structure of the Spleen*, by Dr. W. Sanders.

Some of these papers are of great merit, and justify the expectation that the new *Annals* will be conducted with spirit.

Annual Report of the Progress of Chemistry and the Allied Sciences. By J. LIEBIG, M.D., and H. KOPP. Edited by A. W. HOFMANN, Ph.D., and W. DE LA RUE. Part III. 1847-8.
London: Taylor and Walton. 1849.

THE object of this annual report is, as its name implies, to enable English chemists to keep pace with the progress of their favourite science, by furnishing them with an authentic record of all discoveries and improvements. The Report embraces not only chemistry, but physics, mineralogy, and geology; and its contents are composed of condensed abstracts of papers published in British and foreign scientific journals. From the title-page it appears that the foreign editors are assisted by the Professors of the University of Giessen, and the task of editing the Report in England is entrusted to Dr. Hofmann and Mr. De La Rue.

The names of the different scientific contributors to this publication are a sufficient guarantee that the contents will have the stamp of authenticity and usefulness. We have not had an opportunity of examining the two first parts; but that which is now before us appears to complete the first volume. It is exclusively devoted to *Organic Chemistry*, and is rich in the abundance and variety of selected articles. Many of these selections we have perused with great interest and profit. The work is not expensive: it will save the labour of referring to a large number of scientific periodicals, and will well repay perusal. It deserves to be patronised by all lovers of scientific chemistry.

The Domestic Economist. January, 1860. Part I. London: Orr and Co.

If we notice this publication, which appears to be a weekly compendium of articles on a variety of subjects, it is because, in the "Domestic Medicine" department, there is a more healthy tone than we are accustomed to meet with in popular periodicals. The writer, who is described as a Fellow of the Royal College of Physicians of Edinburgh, is an enemy to quackery: and he may thus, by taking a proper course, apply an antidote to the poison which is so profusely distributed through other channels among the poorer classes of society.

Proceedings of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, Feb. 12, 1860.

DR. ADDISON, PRESIDENT.

A Case of Stricture of the Eustachian Tube, and the appearances presented in a post-mortem examination; to which are added some Observations on the use of the Oscope in the diagnosis of Diseases of the Ear. By JOSEPH TOYNBEE, F.R.S., Senior Surgeon to the St. George's and St. James's General Dispensary.

In this paper the author first alludes to the various opinions held by writers on diseases of the ear as to the causes of obstruction in the Eustachian tubes. He then proceeds to give the particulars of a dissection, in which the source of obstruction was one which has not hitherto been alluded to; viz. a thickening of the bony parietes of the tube.

The case was of a man, *æt.* 46, who died from scrofulous disease, and in whom the ear was examined during life, the appearances of which are detailed, and the peculiar effects of stricture of the Eustachian tube on the membrani tympani are pointed out.

Upon dissection the internal portion of the Eustachian tube, for the length of half an inch, was found to be quite healthy; but about that distance from the tympanic cavity there was a sudden constriction, which, for the length of about a line and a half, was so contracted that, even when the anterior wall of the tube was removed, it was with difficulty that an ordinary-

sized bristle could be introduced into the opening. The cause of the stricture was described as being an enlargement of the external and internal osseous walls of the tube.

The presence of mucus in the tympanic cavity in cases of obstruction of the Eustachian tube is pointed out as an important symptom; and it is remarked that in those instances where perforation of the membrana tympani (in supposed cases of stricture of the Eustachian tube) has been successfully resorted to, it is not mentioned that mucus was found; from which fact, in connection with others, the author of the paper is of opinion that the cause of deafness in such cases consisted in a peculiar disease of the membrana tympani itself rather than in disease of the Eustachian tube.

The concluding part of the paper consists of observations on the use of the *otoscope* in the diagnosis of disease of the ear. This instrument consists of an elastic tube, eighteen inches long, and about half an inch in diameter, each extremity having attached to it a piece of ivory or ebony. One end of this tube being placed in the external meatus of the patient, the other is inserted in that of the surgeon, and by this means sounds emanating from the tympanic cavity of the patient can be distinctly heard by the medical man.

The sound produced by the passage of air into the tympanic cavity, when the organ of hearing is healthy, consists of a series of very faint cracks, which are distinctly appreciable by the use of the *otoscope*. The author states it as his opinion that, as a general rule, when the Eustachian tubes are open patients can force air into the tympanic cavity by attempting to make a forcible expiration while the mouth and nostrils are closed. Exceptions to this rule are found in children, and in certain adults, who cannot be taught to make the necessary forcible expiration: in these cases recourse must be had to the Eustachian catheter, which being introduced into the Eustachian tube, and another tube very light and elastic (*the explorer*) being attached to the nozzle, the medical man can blow through it, and distend the tympanic cavity at the same time that he is listening with the *otoscope* inserted in the meatus externus.

Case of Stricture of the Oesophagus; fatal, two years and three months after accidentally swallowing soap-lees. By W. R. BASHAM, M.D., Physician to the Westminster Hospital.

The subject of this case was a woman, *æt.* 22, who was admitted into the Westminster Hospital on July 16, 1847, suffer-

ing from the ordinary symptoms of poisoning by a corrosive irritant. Five days previously, she had drunk by mistake some of the soap-lees, used in marble polishing, which consists of a caustic solution of impure carbonate of soda. An œsophagus tube at this time passed readily into the stomach. Under a soothing plan of treatment, with blisters, and calomel with opium, she steadily improved, and was discharged at her own request ten days after admission. Eleven months afterwards, on June 8, 1848, she was again admitted, emaciated and weak, and unable to swallow either solids or fluids. The œsophagus being examined with a small gum-elastic catheter (No. 8), a trifling obstruction was felt at a point corresponding to about an inch below the cricoid cartilage; and about an inch and a half or two inches lower down, another impediment was met with, which it required steady and prolonged pressure to overcome. The catheter was passed into the stomach daily, its size being gradually increased. After the first day of this treatment the patient was able to swallow liquid food, but she could not obtain a passage for any solid portions of food. She increased in flesh and strength, and on June 30th was made an out-patient, but neglected to attend, and on July 18th was re-admitted with aggravation of the symptoms. A blister was applied, and the catheter again passed, with the same good effect as before. At the end of August she was made out-patient, but remained as a nurse in the hospital. In January 1849 she left it. On the 10th September, 1849, she was admitted for the fourth time. She was now more attenuated and exhausted, was quite unable to swallow even fluids, and the stricture could not be passed. She died on the 19th September. The body being examined, the upper third of the œsophagus was found much dilated, and its coats thickened. Between the first and second stricture the tube was contracted to about the diameter of a No. 8 catheter. The second stricture would not admit a probe from above; it was only from below upwards that a passage could be obtained.

The author notices the series of symptoms and pathological changes that attended the formation of the stricture; and quotes several other examples related by Sir C. Bell, Mr. Cumin, and Mr. Dewar, in which the same were observed. In conclusion, he suggests the propriety of commencing in such cases the use of the œsophageal bougie as soon as the inflammatory condition of the parts has been subdued, though no positive symptoms of dysphagia yet present themselves, and of continuing its use daily for months, with the view of preventing the formation of stricture.

MANCHESTER MEDICO-ETHICAL ASSOCIATION.

At a meeting of the Committee of the Medico-Ethical Association, held Feb. 7th, it was unanimously resolved that the following minute be made in the books of the Association, and that copies be forwarded to the Poor-law Board, the General Board of Health, and the Registrar-General; and also, for publication, to the Editors of the Medical Gazette, Lancet, and Medical Times:—

"The Committee of the Manchester Medico-Ethical Association conceive it right to record the high sense which they entertain of the just and impartial conduct of the Poor-law Board, in their recent refusal to sanction a proposal of the Chorlton Board of Guardians to reduce the salaries of their medical officers.

"The Committee, further, would urge upon all members of the medical profession the policy as well as the justice of giving cordial assistance to the central authorities in London, by supplying them with statistical and other information when applied for; recent experience having shown that it is to them the profession must chiefly look for support and protection in any contests that may arise out of the growing tendency of local Boards to depreciate medical services."

(Signed)

J. L. BARDSLEY, M.D. President.

J. AIKENHEAD, } Hon. Secs.
W. C. WILLIAMSON, }

About three months since, the Board of Guardians of the Chorlton Union, in consequence, as is reported, of a dispute with their medical officers, arising out of the late visitation of cholera, proposed to reduce the payment to these gentlemen from five shillings (the existing rate) to three shillings per case of sickness placed under their care. The grounds for this proceeding were said to be, that the appointment of poor-law surgeon was analogous to that of surgeon to a public charity, and served as an introduction to private practice; that the rate of payment was higher than that obtained in neighbouring unions; that other qualified practitioners could be found who would take the appointment at the reduced rate. In communicating this proposal to the Poor-law Board, the Guardians further stated that they were fully prepared to accept the resignations of their medical officers, should they decline to receive the reduced payment. The Manchester Medico-Ethical Association, together with the medical officers of the Union, memorialised the Poor-law Board against any reduction of medical salaries on such principles; and in consequence, the Board refused to sanction the proposal of the Guardians.

NEWCASTLE AND GATESHEAD PATHOLOGICAL SOCIETY.

Nov. 8, 1849.

Statistics of Fever.

DR. BULMAN communicated a paper on the mortality from continued fever among the patients of the dispensary and fever hospital at Newcastle-on-Tyne, during forty-five years, or from 1804 to 1848, both inclusive. The Fever Hospital was opened in the month of September, 1804; it stands to the north-west of the town, in an elevated, open, and retired situation, and contains four large wards, in each of which are six beds, and three smaller wards, holding four beds in each, so that there is accommodation for 36 patients. The physicians of the dispensary (which has been established nearly a century) attend to the Fever Hospital in annual rotation. A register is kept by the attending physician, in which the case of each patient is entered on his admission, and its subsequent progress reported; he also draws up an annual report for the information of the governors of the institution. From these registers and annual reports of the attending physician, and also from the annual reports of the dispensary, the following tables have been constructed:—

TABLE I.—Showing the ratio of mortality in continued fever in the cases treated at the Fever Hospital. Newcastle-on-Tyne, from the year 1804 to the year 1849, both inclusive.

Year.	Admitted.	Died.
1804-5 ...	12 ...	3 or 1 in 4
1805-6 ...	8 ...	2 or 1 in 4
1806-7 ...	16 ...	2 or 1 in 8
1807-8 ...	8 ...	1 or 1 in 8
1808-9 ...	13 ...	2 or 1 in 6½
1809-10 ...	10 ...	3 or 1 in 3½
1810-11 ...	10 ...	1 or 1 in 10
1811-12 ...	7 ...	3 or 1 in 2½
1812-13 ...	4 ...	1 or 1 in 4
1813-14 ...	9 ...	1 or 1 in 9
1814-15 ...	10 ...	2 or 1 in 5
1815-16 ...	14 ...	2 or 1 in 7
1816-17 ...	63 ...	12 or 1 in 5½
1817-18 ...	106 ...	9 or 1 in 11½
1818-19 ...	171 ...	13 or 1 in 14
1819-20 ...	39 ...	6 or 1 in 6½
1820-21 ...	45 ...	5 or 1 in 9
1821-22 ...	30 ...	1 or 1 in 30
1822-23 ...	70 ...	6 or 1 in 11½
1823-24 ...	13 ...	4 or 1 in 3½
1824-25 ...	20 ...	2 or 1 in 10
1825-26 ...	60 ...	9 or 1 in 6½
1826-27 ...	62 ...	11 or 1 in 5½
1827-28 ...	61 ...	8 or 1 in 7½

Year.	Admitted.	Died.
1828-29 ...	48 ...	7 or 1 in 6½
1829-30 ...	22 ...	5 or 1 in 4½
1830-31 ...	26 ...	2 or 1 in 13
1831-32 ...	94 ...	13 or 1 in 7½
1832-33 ...	27 ...	4 or 1 in 6½
1833-34 ...	23 ...	5 or 1 in 4½
1834-35 ...	33 ...	5 or 1 in 6½
1835-36 ...	51 ...	7 or 1 in 7½
1836-37 ...	42 ...	6 or 1 in 7
1837-38 ...	162 ...	22 or 1 in 7½
1838-39 ...	120 ...	17 or 1 in 7½
1839-40 ...	128 ...	23 or 1 in 5½
1840-41 ...	114 ...	13 or 1 in 8½
1841-42 ...	87 ...	11 or 1 in 7½
1842-43 ...	60 ...	8 or 1 in 7½
1843-44 ...	124 ...	12 or 1 in 10½
1844-45 ...	55 ...	10 or 1 in 5½
1845-46 ...	53 ...	11 or 1 in 4½
1846-47 ...	137 ...	20 or 1 in 6½
1847-48 ...	710 ...	66 or 1 in 10½
1848-49 ...	155 ...	20 or 1 in 14½
Males ...	1818	244 or 1 in 7½
Females ...	1315	148 or 1 in 8½
Total ...	3133	392 or 1 in 7½

TABLE II.—Showing the ratio of mortality in continued fever in the cases treated at the Dispensary, Newcastle-on-Tyne, from the year 1804 to the year 1849, both inclusive.

Year.	Admitted.	Died.
1804-5 ...	74 ...	6 or 1 in 12½
1805-6 ...	42 ...	2 or 1 in 21
1806-7 ...	55 ...	1 or 1 in 55
1807-8 ...	28 ...	2 or 1 in 14
1808-9 ...	25 ...	1 or 1 in 25
1809-10 ...	39 ...	0
1810-11 ...	16 ...	1 or 1 in 16
1811-12 ...	7 ...	0
1812-13 ...	1 ...	0
1813-14 ...	4 ...	1 or 1 in 4
1814-15 ...	9 ...	0
1815-16 ...	12 ...	2 or 1 in 6
1816-17 ...	129 ...	3 or 1 in 45
1817-18 ...	328 ...	13 or 1 in 25½
1818-19 ...	368 ...	14 or 1 in 26½
1819-20 ...	77 ...	3 or 1 in 25½
1820-21 ...	23 ...	0
1821-22 ...	65 ...	3 or 1 in 21½
1822-23 ...	133 ...	3 or 1 in 44½
1823-24 ...	32 ...	0
1824-25 ...	205 ...	3 or 1 in 68½
1825-26 ...	257 ...	13 or 1 in 19½
1826-27 ...	296 ...	6 or 1 in 49½
1827-28 ...	191 ...	1 or 1 in 191
1828-29 ...	186 ...	8 or 1 in 23½
1829-30 ...	101 ...	1 or 1 in 101
1830-31 ...	100 ...	1 or 1 in 109
1831-32 ...	538 ...	9 or 1 in 59½
1832-33 ...	140 ...	1 or 1 in 140
1833-34 ...	183 ...	5 or 1 in 36½
1834-35 ...	356 ...	7 or 1 in 50½

Year.	Admitted.	Died.
1835-36	276	6 or 1 in 46
1836-37	192	8 or 1 in 24
1837-38	443	22 or 1 in 10 $\frac{1}{2}$
1838-39	404	20 or 1 in 20 $\frac{1}{2}$
1839-40	529	22 or 1 in 24 $\frac{1}{2}$
1840-41	427	15 or 1 in 28 $\frac{1}{2}$
1841-42	411	13 or 1 in 31 $\frac{1}{2}$
1842-43	470	16 or 1 in 29 $\frac{1}{2}$
1843-44	431	5 or 1 in 86 $\frac{1}{2}$
1844-45	299	4 or 1 in 32 $\frac{1}{2}$
1845-46	233	6 or 1 in 38 $\frac{1}{2}$
1846-47	349	13 or 1 in 26 $\frac{1}{2}$
1847-48	405	25 or 1 in 16 $\frac{1}{2}$
1848-49	116	2 or 1 in 56
Total	5968	287 or 1 in 31 $\frac{1}{2}$

TABLE III.—Showing the ratio of mortality in continued fever in the cases treated at the Fever Hospital and Dispensary, Newcastle-upon-Tyne, from the year 1804 to the year 1849, both inclusive.

Year.	Admitted.	Died.
1804	F. H. ... 12	3 or 1 in 4
	D. ... 74	6 or 1 in 12 $\frac{1}{2}$
1805	F. H. ... 8	2 or 1 in 4
	D. ... 42	2 or 1 in 21
1806	F. H. ... 16	2 or 1 in 8
	D. ... 55	1 or 1 in 55
1807	F. H. ... 8	1 or 1 in 8
	D. ... 28	2 or 1 in 14
1808	F. H. ... 13	2 or 1 in 6 $\frac{1}{2}$
	D. ... 26	1 or 1 in 25
1809	F. H. ... 10	3 or 1 in 3 $\frac{1}{2}$
	D. ... 39	0
1810	F. H. ... 10	1 or 1 in 10
	D. ... 16	1 or 1 in 16
1811	F. H. ... 7	3 or 1 in 2 $\frac{1}{2}$
	D. ... 7	0
1812	F. H. ... 7	4 or 1 in 4
	D. ... 1	0
1813	F. H. ... 9	1 or 1 in 9
	D. ... 4	1 or 1 in 4
1814	F. H. ... 10	2 or 1 in 5
	D. ... 9	0
1815	F. H. ... 14	2 or 1 in 7
	D. ... 12	2 or 1 in 6
1816	F. H. ... 68	12 or 1 in 5 $\frac{1}{2}$
	D. ... 129	3 or 1 in 43
1817	F. H. ... 166	9 or 1 in 11 $\frac{1}{2}$
	D. ... 329	13 or 1 in 25 $\frac{1}{2}$
1818	F. H. ... 172	13 or 1 in 14
	D. ... 368	14 or 1 in 26 $\frac{1}{2}$
1819	F. H. ... 39	6 or 1 in 6 $\frac{1}{2}$
	D. ... 77	3 or 1 in 25 $\frac{1}{2}$
1820	F. H. ... 45	5 or 1 in 9
	D. ... 23	6
1821	F. H. ... 30	1 or 1 in 30
	D. ... 65	3 or 1 in 21 $\frac{1}{2}$
1822	F. H. ... 70	6 or 1 in 11 $\frac{1}{2}$
	D. ... 133	3 or 1 in 44 $\frac{1}{2}$
1823	F. H. ... 13	4 or 1 in 3 $\frac{1}{2}$
	D. ... 32	0

Year.	Admitted.	Died.
1824	F. H. ... 20	2 or 1 in 10
	D. ... 296	9 or 1 in 63 $\frac{1}{2}$
1825	F. H. ... 60	9 or 1 in 6 $\frac{1}{2}$
	D. ... 257	13 or 1 in 19 $\frac{1}{2}$
1826	F. H. ... 62	11 or 1 in 5 $\frac{1}{2}$
	D. ... 296	6 or 1 in 49 $\frac{1}{2}$
1827	F. H. ... 61	4 or 1 in 15 $\frac{1}{2}$
	D. ... 191	1 or 1 in 191
1828	F. H. ... 48	7 or 1 in 6 $\frac{1}{2}$
	D. ... 186	8 or 1 in 23 $\frac{1}{2}$
1829	F. H. ... 22	5 or 1 in 4 $\frac{1}{2}$
	D. ... 101	1 or 1 in 101
1830	F. H. ... 26	2 or 1 in 13
	D. ... 169	1 or 1 in 169
1831	F. H. ... 94	13 or 1 in 7 $\frac{1}{2}$
	D. ... 538	9 or 1 in 59 $\frac{1}{2}$
1832	F. H. ... 27	4 or 1 in 6 $\frac{1}{2}$
	D. ... 146	1 or 1 in 146
1833	F. H. ... 23	5 or 1 in 4 $\frac{1}{2}$
	D. ... 183	5 or 1 in 36 $\frac{1}{2}$
1834	F. H. ... 39	5 or 1 in 6 $\frac{1}{2}$
	D. ... 356	7 or 1 in 50 $\frac{1}{2}$
1835	F. H. ... 51	7 or 1 in 7 $\frac{1}{2}$
	D. ... 278	6 or 1 in 46
1836	F. H. ... 42	6 or 1 in 7
	D. ... 192	8 or 1 in 24
1837	F. H. ... 162	22 or 1 in 7 $\frac{1}{2}$
	D. ... 443	23 or 1 in 20 $\frac{1}{2}$
1838	F. H. ... 120	17 or 1 in 7 $\frac{1}{2}$
	D. ... 404	20 or 1 in 20 $\frac{1}{2}$
1839	F. H. ... 128	23 or 1 in 5 $\frac{1}{2}$
	D. ... 539	23 or 1 in 24 $\frac{1}{2}$
1840	F. H. ... 114	13 or 1 in 8 $\frac{1}{2}$
	D. ... 427	15 or 1 in 28 $\frac{1}{2}$
1841	F. D. ... 87	11 or 1 in 7 $\frac{1}{2}$
	D. ... 411	13 or 1 in 31 $\frac{1}{2}$
1842	F. H. ... 60	8 or 1 in 7 $\frac{1}{2}$
	D. ... 470	16 or 1 in 29 $\frac{1}{2}$
1843	F. H. ... 124	12 or 1 in 10 $\frac{1}{2}$
	D. ... 431	5 or 1 in 86 $\frac{1}{2}$
1844	F. H. ... 55	16 or 1 in 5 $\frac{1}{2}$
	D. ... 209	4 or 1 in 52 $\frac{1}{2}$
1845	F. H. ... 53	11 or 1 in 4 $\frac{1}{2}$
	D. ... 233	6 or 1 in 38 $\frac{1}{2}$
1847	F. H. ... 137	20 or 1 in 6 $\frac{1}{2}$
	D. ... 349	13 or 1 in 26 $\frac{1}{2}$
1848	F. H. ... 710	66 or 1 in 10 $\frac{1}{2}$
	D. ... 469	25 or 1 in 18 $\frac{1}{2}$
1849	F. H. ... 155	20 or 1 in 14 $\frac{1}{2}$
	D. ... 116	2 or 1 in 58
Total	12,121	679 or 1 in 17 $\frac{1}{2}$

By the first table it appears that the total number of patients admitted in 45 years was 3133, and the total number of deaths 392, or one in eight nearly. Of the total number admitted 1818 were males, of whom died 244, or, in round numbers, 1 in 7 $\frac{1}{2}$; whilst 1315 were females, of whom died 148, or, in round numbers, 1 in 9. This shows that continued fever is somewhat less fatal to females than to males; but it is to be remembered that many of the female patients were domestic servants,

and were consequently sent into the hospital at the very commencement of their illness; a circumstance which greatly increases their chance of recovery. The greatest mortality occurred in the year 1821, the deaths amounting to 1 in 24; the least mortality in the year 1821, the deaths being only 1 in 30.

No. II. contains the amount of admissions and deaths at the dispensary from the year 1804 to the year 1849, both inclusive. From this table it appears that the total number of patients labouring under fever admitted in 45 years was 8968, and the total number of deaths 287, or, in round numbers, 1 in 31½. No deaths occurred in the years 1809, 1811, 1812, 1814, 1820, and 1823, the number of patients treated during those years being respectively 30, 7, 1, 8, 23, and 32. The greatest mortality took place in the year 1813, the deaths amounting to 1 in 4.

No. III. contains the number of admissions and of deaths, both at the Fever Hospital and at the Dispensary, from the year 1804 to the year 1849, both inclusive. This table shows how very much higher the mortality is amongst the patients admitted into the hospital than amongst those treated at their own houses. Thus there are six years during which not a single dispensary patient labouring under fever died, whilst the mortality at the hospital during those six years respectively was 1 in 3½, 1 in 2½, 1 in 4, 1 in 5, 1 in 9, and 1 in 2½. Again, in 1824, whilst the mortality in the hospital was 1 in 10, among the dispensary patients it was only 1 in 68½. In 1829 the mortality at the hospital was 1 in 4½; at the dispensary, 1 in 101; and lastly, in order not to multiply instances, in 1832 the mortality at the hospital was in 6½, whilst at the dispensary it was as low as 1 in 140.

On comparing the deaths with the admissions at the Fever Hospital and the Dispensary respectively, we find that at the former institution the mortality has been 1 in 8, whilst at the latter it has been only 1 in 31½. This difference, great as it appears, cannot be accounted for by any difference in the method of treatment, inasmuch as the same physicians are attached to both charities, but must be attributed to nearly all the bad cases being sent to the hospital.

It is worthy of remark that 1821 is the only year in which the mortality was less in the Fever Hospital than at the Dispensary, the deaths in the former being only 1 in 30, whilst at the latter they were 1 in 21½.

In order, however, to obtain a more correct statement of the mortality from fever in this town, it is necessary to add toge-

ther the numbers treated and the deaths at both institutions. When this is done it is found that the patients admitted amount to 12,121, of whom died 679, or 1 in 17 566-679ths, or, in round numbers, 1 in 17½; a mortality, in Dr. Buhman's opinion, considerably less than that of most of the other large cities and towns of Great Britain.

Since the Fever Hospital in this town was opened the patients have been under the care of eleven physicians; but, as two of these only attended for one year, they must be left out of the account. On the practice, then, of the nine others, who have attended twice or oftener, the mortality has varied respectively from 1 in 3½ to 1 in 5, from 1 in 6 to 1 in 10, from 1 in 2½ to 1 in 30, from 1 in 3½ to 1 in 13 3-13ths, from 1 in 4 to 1 in 15½, from 1 in 4½ to 1 in 10, from 1 in 6 17-20ths to 1 in 7 10-11ths, from 1 in 7 4-11ths to 1 in 10 25-33rds, and from 1 in 7 1-17th to 1 in 10½.

If we take the total number of patients treated by each physician, the mortality stands thus:—1 in 11, 1 in 8½, 1 in 5½, 1 in 9 4-30ths, 1 in 10 8-27ths, 1 in 9, 1 in 6 28-29ths, 1 in 18, 1 in 7½, 1 in 9 17-24ths, and 1 in 8½.

Now it would seem that these differences in the ratio of mortality are to be attributed rather to the greater severity of the fever in different epidemics, and even of the same epidemic at different periods of its course, than to any difference in the method of treatment; and, as a further proof of this, it may be mentioned that, under the late Dr. Bateman, who attended the House of Recovery in London for fourteen years, the annual mortality varied from 1 in 3½ to 1 in 12; whilst under his able successors in thirteen years it has varied from 1 in 5 8-96ths to 1 in 12 8-34ths. Again, according to Dr. Christison, the mortality among the hospital patients at Edinburgh in 1826-7 was 1 in 10 99; whereas in 1837 it was 1 in 10; and in 1838, 1 in 6 27. According to Dr. Cowan, of Glasgow, the mortality from fever in that city in the years 1835-6-7 was 1 in 15, 1 in 12, and 1 in 10, respectively. And lastly, Dr. Bardeley, of Manchester, states that the annual hospital average in that city has varied, between 1818 and 1828 inclusive, from 1 in 11½ to 1 in 6½; and the average of the mortality for all these years is 1 in 8½.

Calcareous Deposit in the substance of the Brain.

Mr. Goss, with Dr. Bates's permission, related the following case:—

T. D. M., æt. 24, a young man of nervous bilious temperament, tall, thin, and of

cachectic appearance, was admitted into the Newcastle Infirmary, under Dr. Bates, on August 2nd, 1849, with hemiplegia of the left side. The arm was pined, twisted, and shrivelled, but half the size of the other, and utterly useless. The left leg was also emaciated, and dragged after him in walking. The face was but slightly distorted. He chiefly complained of phthisical symptoms; the hemiplegia he had been affected with from infancy. He had cough, with copious expectoration, tinged occasionally with blood, night sweats, diarrhoea, and was extremely weak. The stethoscope and percussion showed the lungs to be greatly diseased, there being general tubercular deposition throughout both organs, a large cavity in the apex of the right lung, with smaller vomices around, and some smaller vomices, and suppurating tubercular masses, in the left. He gradually became worse; on the 18th August was found sleepless and delirious; coma set in on the 22nd, and death took place on the evening of that day. The history given by the friends who accompanied him to the hospital showed that he had been a fine robust child until between four and five years old, when he was suddenly seized with a fit, which lasted some few days, attended with convulsions, and pronounced by the medical attendant to be one of apoplexy. From this he gradually recovered, but remained ever since paralysed on the left side. His mental faculties were exceedingly good; and, according to a school-fellow, he was considered a sharp lad.

Autopsy 24 hours after death.—Skull of a natural thickness, and well formed; dura mater natural, but very adherent to calvarium in the falx major, near its attachment to the crista Galli. There existed an irregular deposit of bone at its edge, developed in and incorporated with the dura mater, and a larger piece existed at the same edge of the falx, about its middle, in contact with the upper surface of the corpus callosum. The arachnoid looked a little thickened, and in some parts opaque, and of a pearly hue. Beneath the arachnoid there was a considerable quantity of effused serum, especially at the base of the skull. The pia mater had an opaque appearance, and was a little congested. The white cerebral substance was of a darker colour and softer than natural, especially at various points throughout the hemisphere. On opening the ventricles they were all found greatly dilated, and full of clear fluid; the lateral ventricles might contain about three ounces of fluid.

In the substance of the right hemisphere there was a large mass of calcareous deposit, about the size of a large hen's egg: this was not contained in a capsule, but

the cerebral substance surrounding it was rather of a darker colour, and adherent to the bony mass by minute cellular bands. The surfaces of the deposit were rounded: at its upper part it projected under the membranes covering the upper surface of the middle of the hemisphere, being separated from them by a thin layer of grey cerebral substance; towards the middle it projected into the lateral ventricle, covered by a thin layer of the white substance of the optic thalamus; indeed, the optic thalamus might be said to be composed of this calcareous mass, covered by a thin layer of white cerebral substance: it extended towards the middle lobe to about an inch from the surface of the base of the brain. The mass is hard, surface smooth, irregularly shaped, and of bony consistence. The substance of the cerebellum was firmer than that of the cerebrum; and, in the centre of the left lobe, was a hard yellowish tubercle, about the size of a bean, with a little congested tunic around it. A smaller one in the same lobe was nearer the surface, both evidently of recent deposition. The spinal chord appeared pretty natural: the left half was slightly smaller than the right, and the nerves coming off from the left were certainly much smaller than the right, and it was thought that the left half of the chord was somewhat softer than the right: it had the natural appearance with the grey centre.

The lungs were filled with tubercles in all shapes of development and progress. A large irregular cavity was found in the apex of right lung, with little or no trace of membranous deposit on its walls, and suppurating tubercles elsewhere. At the apex of left lung were many small suppurating cavities; the rest of lung much less occupied with tubercular deposit than the right; bronchial glands enlarged, bluish, and some of them with softening tubercular masses in them. Heart flabby, thin, and pale. Liver pale, of a greasy appearance, a little enlarged, with many tubercular spots beneath the capsule, appearing like dots on its surface, minute specks also existing throughout its structure. Pleura pretty healthy; but in its centre a piece of yellowish tubercle, about the size of a bean; its capsule here and there thickened and opaque. Kidneys pretty natural; but studded, like the liver, with the same pin-head-like deposits. Mesenteric glands slightly enlarged, and one of them inflamed and tuberculous. Stomach and intestines pretty healthy, except a few small tuberculated solitary glands in small intestines, with one or two very small ulcers of recent date.

It appears surprising that so large and solid a mass of calcareous matter should

have remained so long within the brain without causing any urgent symptoms, or any disorder of the functions of the brain further than the hemiplegia. Its existence may, perhaps, with safety be dated from some convulsive fits he had when a child; but whether there was at that time a calcareous mass may be doubted, since it is not very probable that so large a tumor as that found at the autopsy should have existed at so early an age. Indeed, that there had been, at the period of the fit, and perhaps for some time previously to it, some tuberculous deposition, which, becoming quiescent after the paralytic seizure, had been partially absorbed, leaving some calcareous salts, and thus led to the formation of so extraordinary a body within the cerebral mass, may perhaps be viewed as a more probable explanation. No less extraordinary is it that the mind should not have been at all affected by the mass, and that the latter should have been found in such a peculiar situation. It might have been supposed that the calcareous matter was deposited by the membranes, and had subsequently become embedded within the substance of the brain; but that view is not tenable, as a layer of healthy brain surrounded it at all parts. The structure of the tumor was very compact, and it appeared under the microscope to consist of an aggregation of the amorphous granules of calcareous salts, consisting chiefly of phosphate of lime.

Dr. ROBINSON, in relating a case of
Desquamative Nephritis,

wished to direct attention to the peculiar appearance of the precipitate of nitrate of urea which was formed in the ordinary manner by the addition to the urine of an equal quantity of nitric acid. The patient, a tall spare man, aged 44, was admitted a patient of the Newcastle Eastern Dispensary, on 12th May, 1849, complaining of pain in the loins, shooting down to the groin on the right side: the pain in the right lumbar region was increased on pressure; he had been in the habit of lifting heavy weights, to which he partly ascribed his disease. The present attack has lasted for a year, but he was three years since under treatment for similar complaints. He stated that his urine was high coloured and scanty, depositing a red sediment. But on examining some which he brought on the following day, it was found that the sediment, which was copious, consisted solely of a large quantity of brownish flocculi and shreds of membrane, intermixed with which were slightly conical tubes, some more than half an inch in length, evidently casts of the larger urinary tubules. The specific gravity of the urine

was 1.18: it was not albuminous, and contained no other morbid deposit. On adding some nitric acid to an equal quantity of the urine, and allowing the mixture to remain for twenty-four hours in a watch-glass, instead of the ordinary crystals, Dr. R. found about a dozen small, hard, reddish globules, the majority equal in size to an ordinary pin's head. There were some smaller deposits of the same shape and consistence; and some of the larger globules had cohered so as to present a beaded arrangement. These bodies continued unchanged in the residual liquid for a week; but on then placing them in water they became rapidly disintegrated, a few minute flakes alone remaining.

The patient was ordered alteratives and stomachics, the latter combined in the first instance with diuretics, and subsequently with tonics. Under this treatment the tubular deposit in the urine very rapidly diminished; and as he was free from pain, and the urine contained but a few membranous shreds, he did not return after his third visit to the dispensary.

Dr. Robinson also mentioned another case in which a somewhat similar deposit was produced on the addition of nitric acid to urine; a reddish amorphous precipitate being then found instead of the pearly crystals of nitrate of urea. The patient, a healthy-looking man, aged 55, formerly a keelman, twenty years since commenced to pass small calculi, varying in size from a millet-seed to a small bean, and he has passed on an average one in each month. The passage of these calculi has been accompanied and preceded by pain in the loins and groin, the chief seat of pain being the right lumbar region; and after the passage of the calculi he has had pain in the testicles. He formerly took ale, but only in moderate quantities. He suffered at the time of his admission (April 1849) much from dyspepsia; had a sense of weight at epigastrium, with flatulence and pain there. These dyspeptic symptoms have been noticed for the last three years only. He perspired freely on the least exertion; pulse languid and compressible; tongue white, and slightly furred; feet and hands cold. The treatment consisted in the use of tonics and stomachics, with occasional counter-irritation. He passed the last calculus a week prior to his admission: tested by the blow-pipe it presented the characters of oxalate of lime. On one occasion the calculus was so large as to cause it to be impacted in the urethra, from which it was extracted by the urethra forceps. There has sometimes been an interval of eight weeks between the attacks of pain, and sometimes only a fortnight; the stone generally passes within two or three

days after the cessation of the pain. During the last three years, before the pain of epigastrium comes on, he has had an attack of jaundice, lasting for a day or two. Under the treatment above described he continued free from pain till the 7th July, when he passed two small calculi. He subsequently passed a considerable quantity of red sand, and has since continued free from urgent symptoms.

Dr. HOUSEMAN exhibited a

Thickened and Enlarged Bursa Patella,

which had been removed by operation, and after the ordinary remedies to promote the absorption of the effused fluid had failed to produce any effect. The skin covering the tumor was extremely thin, and a small portion sloughed away after the operation; but the wound was soon filled with healthy granulations, and the case did well.

WESTMINSTER MEDICAL SOCIETY.

MR. HIRD, PRESIDENT.

Saturday Jan. 24, 1850.

DR. HENRY BENNET introduced to the notice of the Society the old preparation of potassa cum calce, fused in the form of cylinders. He recommended this as a more convenient caustic than the common potassa fusa.

A large Concretion lying loosely in a Hernial Sac.

Mr. CANTON stated that this concretion was removed after death from an aged man, who had laboured under a direct inguinal hernia of the right side for many years. No further history could be procured. The scrotum was felt to contain gut and omentum, and, in addition, a solid substance, which might be moved freely up to the abdominal ring, but could not be made to pass that opening: the fingers being removed, it glided directly to the bottom of the sac, and lay just above the testicle. On cutting through the lower part of the sac it fell out on to the floor, from which it bounded, as though it were a piece of India rubber. Its form was oval, with slightly flattened surfaces, which were quite smooth; weight, one ounce and a half; colour, light yellowish brown; size, two inches in the long, and an inch and a half in the short diameter; consistence, that of caoutchouc; structure, finely lamellated; the nucleus was a pellet of fat as large as a marble. The uniform smoothness of the surface of the concretion, and the uninterrupted continuity of the laminae throughout, forbade the idea of

a peduncle having existed. Nitric acid applied, and prolonged immersion in boiling water, produced no effect on the stratified portion, which, under the microscope, appeared finely granular, with intermingled oil globules. The nucleus presented the usual appearance of fat. A peculiarity existed in the hernia itself being constituted of the entire caecum, having as complete a peritoneal sac as invests any ordinary rupture.

Malignant Disease of the Ovaries.

This specimen was exhibited by Mr. NUNN. It was taken from the body of a female, sixty-two years of age, who died in St. Giles's Infirmary, after several copious discharges of blood from the rectum. The right ovary presented the greatest evidences of malignancy, the left contained within it several cysts; the fluid in each of these cysts differed in its appearance from that in the others. The gorged cells, which are said to be proper to ovarian disease, were found in all in greater or less abundance. The right ovary was situated the highest in the pelvis, and was most plentifully supplied with blood. The spermatic artery entering its upper part was excessively tortuous. In addition to this, branches from the superior and middle hæmorrhoidal, epigastric, internal iliac, and uterine arteries, also assisted to fill the tumor; the ureter was involved in the pedicle of this ovary. The uterus was dragged from the centre to the side of the pelvis, and was so placed that its long axis was directed transversely, instead of being in its normal relations. The organ presented, on being laid open, no marks of disease, although malformed, by being divided into an upper and lower compartment. The os uteri was perfectly healthy, and had the appearance of belonging to a virgin uterus. The vagina and bladder were quite sound; the rectum, about an inch and a half near its lower termination, was perforated by a circular opening, large enough to admit three fingers; otherwise this viscus was healthy. The aperture formed the means of communication between the rectum and a highly-vascular cancerous lump, situated in front of the rectum, and behind the vagina and uterus. The caecum was thrown from its seat in the right iliac fossa into the middle of the belly, not by being displaced by the enlarged ovary, but by means of the tension of the peritoneum. Cancerous deposit was found in the breast, and in several of the other organs.

Apoplexy, preceded by Epileptiform Fits. By Dr. WOODFALL.

The patient was a female, about sixty years of age, and from a very early period

of life had been subject to fits, which do not appear to have been strongly marked by convulsions, nor of frequent occurrence. At eight o'clock on the morning of Oct. 20th, 1849, she was found on the floor of her bed-room, where she had fallen while in the act of washing herself, unable to rise, but perfectly sensible. Her speech was observed to be altered. She continued sensible until about eleven o'clock A.M., when she gradually became unconscious; and when seen by Dr. Woodfall, at four o'clock P.M., was in a state of profound coma. The measures resorted to for her relief were of no avail, and she died at three o'clock the following morning, nineteen hours from the commencement of the attack. The head was examined thirty-six hours after death. The substance of the brain was wounded in removing the calvarium, and a considerable quantity of blood flowed out. On the surface of the left hemisphere two thin plates of bone were found, of small size: and in the superior longitudinal sinus were two others, about an inch in length, and one-sixth in thickness, at the thickest part. The substance of the brain was generally soft. The floors of the lateral ventricles were stained with blood, which had filled them, but which had mostly escaped in opening the cranium. The softening was most marked in the posterior corner of the right ventricle, and in parts presented almost the appearance of pus.

Disease of the Head of the Thigh-bone.

Mr. HENRY SMITH exhibited two specimens of the upper extremity of the femur, consisting of the head and trochanter major, which had been removed from the living body by operation: the one by himself, and the other by Dr. Morris, of Spalding. Although the specimens indicated the same disease, they differed materially in some respects, and Mr. Smith exhibited them for the purpose of showing the pathological changes which take place in the head and neck of the thigh bone in hip-disease, and how they differ according to the length of time the disorder has existed. In the one case, when he had removed the bone, the disease had not existed more than two years: here the head of the bone was completely carious, but it retained its globular shape, and the neck of the bone was neither altered in its structure, nor was its natural relation to the shaft destroyed. The other specimen was that from a youth who had had hip-disease for six years: here the head of the thigh-bone had completely lost its globular shape, was flattened out widely, and the neck of the bone was much absorbed; and instead of being at an oblique angle with the shaft, it formed a right

angle with it. Mr. Smith did not bring forward these specimens for the purpose of arguing about the propriety of the operation of excision of the head of the femur, as that was now a settled question, but merely with the object of showing the pathological differences in the bone, so beautifully marked.

Dr. LANKESTER read a paper on

Fungoid Disease of the Bladder, and its Diagnosis.

Dr. Lankester stated that his attention was directed to this disease, and its diagnosis, by the following case:—A gentleman, sixty-two years of age, was suddenly attacked, whilst working in his garden, with pain in his back, which was followed by the expulsion of some bloody urine. The pain in the back continued, with the bloody urine. He had recourse to medical advice, but at the end of a twelvemonth he was no better: the pain in the back continued; there was also pain referred to the neck of the bladder, and shooting pains down the thighs. He had suffered for many years from dyspepsia, which was now very much increased. He had consulted several physicians and two surgeons at different times; and the sound had been passed several times, without a stone being discovered in the bladder, and with the effect of producing great pain and an increase of blood in the urinary secretion. There was frequent desire to make water. The water passed was now sometimes bloody, and sometimes comparatively clear. It was acid to test-paper. On cooling, an organic deposit, with lithate of ammonia, occurred. The organic matters consisted of shreds of mucus, pus, and blood-globules. Albumen was precipitated by heat and nitric acid. No stone having been detected by sounding, the general symptoms of disease of the kidney being absent, and the hæmorrhage evidently proceeding from the bladder, and the urine containing mucus, pus, and blood-globules, the case was treated as one of chronic inflammation of the bladder, with ulceration. With rest and sedatives, and afterwards copious, the patient improved, and removed into the country. He again consulted a surgeon, who recommended the passing the catheter, and injecting the bladder. This was followed with increased bleeding, great pain in the back and over the pubes, and constant desire to pass water. Diarrhoea and vomiting came on, and he rapidly sunk, eighteen months after the first attack. On examination after death, the left kidney was found double the natural size, and greatly congested. The right kidney was enlarged, and presented patches of granular inflammation. Both pelves were congested,

and contained puriform matter. The ureters were congested. The coats of the bladder were thickened; the prostate enlarged. A loose mass, of a yellowish colour, was found in the bladder. Seated at the fundus was a small tumor, vascular and red in the centre, and yellowish at the sides. Another larger tumor presented itself on the side of the bladder above. These tumors resembled each other, all of them affording evidence of encephaloid disease, combined with fungus hæmatodes. Vascular spots, similar to those in the bladder, were found in the prostate. The author drew attention to the difficulty of the diagnosis of malignant disease of the bladder. Neither the presence of blood in the urine, nor its persistence, was alone sufficient to determine the case. He believed the microscope presented the best means we possessed. The presence of the peculiar nucleated and fusiform cells of carcinoma was a sure indication of the presence of malignant disease. He referred to three cases, in proof of this position. The absence of these cells, though not always conclusive, was yet very generally indicative, of hæmorrhage from the bladder, arising from some other source. In the treatment of these cases, where the malignant disease was made out, great care should be taken not to introduce instruments into the bladder unnecessarily, as the fatal result must be hastened by such a practice. Sedatives, more especially opium and astringents, as gallic acid, acetate of lead, and sesquichloride of iron, were the principal remedies.

February 2, 1850.

Caries of the Head of the Femur.

MR. HAYNES WALTON exhibited three specimens of caries of the head of the femur, removed during life, to show the alteration in form and structure effected in the thigh-bone by morbus coxarius. The first was taken from a girl nine years old. In place of the head and neck, there was a rounded and spongy portion of bone, projecting little more than half an inch from the femur. She made a good recovery. The second was from a lad twenty years old; the head was nearly gone; the neck was of the natural size, but so soft that it broke in two during the operation. The third was from a boy eleven years old; part of the head was lost, and the neck was shortened and reduced in size. He (Mr. Walton) remarked, that he was anxious to discover some diagnostic signs by which the presence of dislocation could be ascertained. Without going into the question as to the proper time for operating, but taking it as a settled

question that we should wait for dislocation, it was important to be able to come to a correct diagnosis. The changes in the form of the bone he had shown, would cause all the symptoms of dislocation. The limb would be shortened and the trochanter elevated, and brought nearer the pelvis. From the position of the limb, nothing could be learned; it may be turned inwards or outwards; the thigh flexed on the pelvis or extended. Those most conversant with hip disease had fallen into error on this point. The patient from whom the second specimen was taken died three months after the operation, from consumption. The end of the femur, which was shown, was rounded off and filled up, like the end of a bone after amputation, of which an example was produced, taken from a patient on whom he (Mr. Walton) had performed secondary amputation, which was also hard and healthy. When the operation was performed, it was soft like the neck; a ligament united it to the anterior edge of the acetabulum.

Fibrous Tumour of the Uterus.

DR. OGIER WARD brought before the Society a specimen of fibrous tumor of the uterus, taken from a patient who had been under his care for hæmoptysis, and who died the day before in Kensington Workhouse, not having previously presented any signs of uterine disease. On examining the body, there was discovered a fibrous tumor internal to the womb, filling up its cavity, attached to the greater extent of its wall, and having its origin from the left side, near the base of the broad ligament. It was lobulated, and consisted of spherical cells; no caudate cells could be discovered. In the cellular tissue connecting it with the walls of the uterus, there was a number of small tumors, which presented under the microscope the same characters as the large tumor. That which he exhibited arose from the cervix, and was not lobulated. The tumor was well supplied with blood-vessels from the uterine walls, which were healthy, except where the growth was attached, and there they were somewhat thickened.

Foreign Body discharged from the Umbilicus.

MR. CHILD read the particulars of the case of a little patient recently under his care, and exhibited a plum-stone, which had escaped from a fistulous opening at the umbilicus, and which, he believed, had been lodged in the intestine for five or six months. His patient, a boy four years old, had suffered from whooping-cough, measles, and scarlet fever, some time prior to his present illness. The last-named disease had been followed by droopy, from which he recovered,

and seemed to enjoy good health afterwards. Some months since the umbilicus became swollen and red, and an abscess formed, which burst, and continued to discharge for several months. He was admitted into a hospital, where the opening was enlarged, and another made about two inches below it. He remained there a fortnight, and while in the hospital feculent discharge occurred from the lower aperture. When he came under Mr. Child's care, there were two sinuses in the walls of the abdomen, one in the centre of the umbilicus, the other a little lower down; the latter yielding the fecal discharge. His health was not much impaired. On the 16th of last month, the plum-stone exhibited was discharged from the wound, after great suffering, and it appeared that it must have been in the intestines since the last fruit-season. After this the fecal discharge was greater; and, on probing the wound, the instrument passed in, at least two inches in depth, backwards into the abdomen. There was no wasting, and the appetite good; bowels acted freely, and the stools were normal.

On the Treatment of Mammary Abscess.

Mr. NUNN read a paper on mammary abscess. He condemned the common plan of treatment by poultices, cold applications, and leeches, and described his own plan, which consisted in confining the patient to the horizontal position, in preventing by every possible precaution any extraneous irritation of the inflamed organ, in enveloping the breast in mercurial ointment spread on thin linen, and to cover this with a tepid poultice. In cases, when the horizontal position cannot be maintained, the gland should be supported by a suitable bandage. After the constitutional irritation, inseparable from an attack of inflammation, has been allayed by a brisk purgative, effervescing salines and proper regimen, the state of the pulse should be most jealously watched, and the proper moment for the administration of tonic medicines carefully looked for; wine and stimulating articles of diet should be allowed only with great caution. In the majority of cases Mr. Nunn is of opinion that, after the first day or two, the patient is more in need of bark and ammonia, quinine and iron, than depletive drugs. The strength of the mercurial application should be adapted to the condition and natural texture of the skin covering the gland. In some instances the ung. hydrarg. fort. will not be found too powerful; in others it will be necessary to dilute it with an equal proportion of ceratum resinæ. A combination of the extract of belladonna, hyoscyamus or opium, in the proportion of 3i. to the 3i. of ointment, will be most effectual

in allaying the intense agony frequently complained of. The leading idea in treating mammary inflammation should be the prevention of suppuration; when that cannot be avoided, the rendering it as circumscribed as possible. He was opposed to large incisions of mammary abscess, and thought the practice of laying open extensive sinuses of the breast uncalled for. The tissue of the gland, he averred, should not be cut, and he quoted the authority of Dr. Gibson, of Philadelphia, to show that sinuses may be obliterated by pressure.

ACADEMY OF MEDICINE, PARIS.

Feb. 5, 1850.

PRESIDENT, M. BRICHETEAU.

Blue Discolouration of the Countenance.

DR. BOUSQUET (Herault) communicated an example of this rare affection: it was the case of a girl, in whom, without any apparent cause, the skin underwent a blue discolouration, at first like indigo, but deepening till her countenance was of a sooty darkness.

"Engorgements" and Deviations of the Uterus.

M. RECAMIER resumed the discussion at considerable length, and terminated his remarks by the following conclusions:—

1. There are certain uterine tumefactions or congestions neither inflammatory, tubercular, fibrous, scirrhus, nor hypertrophic, but which are hæmorrhagic because the epithelium of the uterine cavity is destroyed.

2. These congestions, like hæmorrhoidal congestions, may be constant, remittent, intermittent, or periodical.

3. Erectile congestions are frequent, and when confirmed (*fixées*) they cease only with the destruction of the ultimate erectile capillaries which compose them. They form the ordinary resolvable *engorgements*.

M. Recamier was proceeding to the subject of intra-uterine productions, when the Academy was adjourned.

SURGICAL SOCIETY OF PARIS.

Feb. 6, 1850.

PRESIDENT, M. DEGUISE, père.

Employment of Tincture of Aconite as a Preventive of Purulent Infection.

M. CHASSAIGNAC, having frequently found benefit from the employment of aconite in the treatment of purulent infection, thought

if would be advantageous to submit every patient to the influence of that remedy after the performance of operations.

M. CHASSAIGNAC had carried out this plan in thirty-two cases, and only five deaths had occurred, and in neither of these did purulent infection take place.

MM. LARREY, FOREST, and GIBALDES observed that the data presented by M. Chassaigmac were insufficient for the determination of the question in its present form.

Fracture of the Femur.

M. HUGUIER exhibited an interesting specimen of fracture of the femur, in a woman aged 64 years, produced by a fall. The neck of the bone was broken both within and without the capsule; the great trochanter was fractured at its base, and completely detached from the rest of the bone. During life there was not one symptom by which these injuries could be detected. The patient died of apoplexy a few hours after the accident.

ACADEMY OF SCIENCES, PARIS.

Feb. 4, 1850.

PRESIDENT, M. DUPREY.

Physiological and Therapeutic Effects of Metallic "Armatures;" or, the Influence of certain Metals on Paralysis of Sensation.

M. BURQ transmitted an essay in which he observed, that in a large number of nervous and other diseases—*e. g.* hysteria, hypochondriasis, gastralgia, idiocy, certain cerebral affections, typhoid fever, cachexia, &c.—the general sensibility of the surface undergoes modifications and impairment.

Whatever may be the cause of the paralysis of sensation, provided no physical impediment to the transmission of sensations to the nervous centres exists, the following phenomena will be observed on placing one or two copper rings on a paralysed limb, *e. g.* the arm:—

1. A sense of formication beneath the ring, which may extend upwards towards the head, and even spread over the trunk of the body. The time in which this occurs varies with the duration and number of rings employed. Formication is not, however, constant: it may be altogether wanting, and the second phenomenon appear in its stead.

2. The sensibility of the surface returns either entirely or partially; or after longer or shorter application of the rings.

3. Some time after the return of sensibility, a sensation of heat is felt in the

part, which, like the formication, may extend to neighbouring parts, but is most intense beneath the copper ring itself.

M. BURQ stated, as the consecutive phenomena, that on removing the rings the sensation of heat, or of formication, disappears gradually, varying with the length of time during which they had remained on the limb. They become, however, more persistent with each application; so that M. Burq considers that, aided by gymnastic exercises, the cure may be complete in thirty or forty days.

The author, in the same communication, referred also to the effects of metallic points on the sensibility of the surface, and stated that his observations on these subjects, and their relation to electricity, were as yet incomplete.

New Mode of treating Deafness.

MR. JAMES YEABSEY submitted a new mode of repairing the effects of complete or partial loss of the *membrana tympani*, by filling the aperture with cotton moistened with distilled water.

Correspondence.

CORONERS AND MEDICAL WITNESSES—THEIR DUTIES AND RESPONSIBILITIES.

SIR,—In this day's number of the *Lancet*, I find the following notices to a correspondent:—

"*A Medical Witness, and others on the same subject.*—It is extraordinary that a writer of so much experience should have fallen into so many errors: we believe that his journal is but very little read, otherwise he might have caused great inconvenience to many members of the profession. The Medical Witnesses Act is declaratory, and has increased the powers of the coroner without limiting in any degree the power which he could previously exercise at common law. A medical witness is bound to obey a common summons in attending an inquest, if it be duly served upon him; but under the authority of such a summons he would not be bound to give medical testimony, unless he had improperly become possessed of the facts of the case. Mr. Symot made a post-mortem examination without any order from the coroner, and in opposition to a request made to him by the summoning officer not to do so; and, having made the examination, he removed from the house the substance which had caused the death of the child. A gentleman who thus acted had no claim for a fee either at law or in equity; and if

the course which he pursued on the occasion to which we refer were to be generally adopted by medical practitioners, it would be impossible to maintain the Medical Witnesses Act on the statute book: the conduct pursued by Mr. Synnot and Mr. Lord was calculated to inflict much injury on the profession, and we have been rejoiced to learn that, so far as we can discover, it has been confined to these two gentlemen."

The above quotation is exceedingly well calculated to mislead the profession, both as to their position as witnesses, as well as to the amount of power the coroner would assume for himself. But before making any further observations on this subject (which is one of great interest to the profession in general, and one on which the sooner they are enlightened the better) I shall give you a short account of my difference with the coroner for Middlesex, or, to be quite correct, his deputy, Mr. Mills:—

In September 1847, I attended a child who was moribund when I saw him; and for my own satisfaction I asked and obtained from the parents permission to make a post-mortem examination: just as I was about to commence, a man requested to see me, and informed me that I must not touch the body, as he was about to give the coroner notice of the suddenness of the death, and that he would hold an inquest. I replied that, in my opinion, an inquest was quite uncalled-for in the present case; there were no suspicious circumstances connected with the death; and that I should proceed with my examination. I did so. One or two days afterwards I received an ordinary witness's summons to attend the inquest; and on appearing I underwent the examination of a medical witness. I applied for my fee of one guinea for my medical testimony, but was refused: thinking this a very arbitrary proceeding on the coroner's part, I summoned him to the Bloomsbury County Court for the debt of one guinea. The judge (Mr. Heath, I think), on the 1st of December, 1847,—for the case had been twice adjourned; once that he might consult some legal authorities on the subject, and the second time because Mr. Mills was unable to attend,—informed me that I must be non-suited, as, being a debt by "tort," and not by contract, it did not come within his jurisdiction; but he advised Mr. Mills to pay me the fee, and in case Mr. Mills did not do so, he said that if I took out a mandamus, I should put the coroner to very heavy expenses, and should be paid my fee, with the costs, as he could not offer any legal or equitable opposition to my claim, the coroner being only an

agent in the matter, and not being invested by the act of parliament with *any discretionary power whatever*. The act directs certain payments to be made by the coroner, and it is compulsory upon him to make them. Mr. Mills said that he had summoned me with an ordinary summons, in order to punish me for making the post-mortem examination without an order from the coroner, as on such a summons I could not claim the usual medical fee. The judge to this replied that Mr. Mills ought to be much obliged to me for acting as I had done. I only claimed one guinea for my medical testimony, whereas, if I had waited for an order to make the examination, I should have been entitled to two guineas. That the form of summons was directed by act of parliament, in order to empower the coroner to fine the medical man who should refuse to obey it in a sum of money not to exceed five pounds; but that nothing in the act gave him the power to withhold the fee if a medical man was present in the room where an inquest was held, either on a verbal message from the coroner requesting his presence, or by accident, and he was asked his medical opinion as to the cause of the death under consideration, he was entitled to his fee. The judge cited a case that had been tried the preceding Trinity term—"Reg. v. the Justices of Caermarthenshire"—where the coroner sought repayment of certain fees for holding an inquest, and other costs incidental thereto, which the justices disallowed. Lord Denman, in delivering judgment, said "that whatever might be decided with regard to the coroner's own remuneration under the 25th Geo. II., c. 29, yet, as to the different sums which he had paid out of his own pocket, under different subsequent statutes, these were compulsory payments by him, and as to these, by the statutes in question, he is entitled to be reimbursed, and the sessions have no discretion." (Lord Denman here enumerated the fees so ordered to be paid by act of parliament, and among them is the fee of one guinea to a medical witness. I quote from "The Jurist.") "These charges are either fixed in amount by statute, or their maximum is limited by an order of sessions, and the coroner is compelled to pay them by the 7th William IV. and 1st Vict., c. 68, immediately after the termination of the proceedings." And again—"Perhaps a distinction might be taken between the summoning of a medical witness and the other expenses now in question, on the score of necessity: but the propriety of requiring the presence of the medical attendant of the deceased in every case in which the death is proper to be inquired into at all, is so unquestionable as almost to amount to a necessity; and it

is better, perhaps, to class it among the necessary expenses of a proper inquest."

Whether an inquest is held properly or not, these fees are all legally payable, and the bailiff, jurors, and witnesses, all attend legally; and their remuneration, as well as that of the owner of the room in which the inquest is held, cannot be justly dependent on the propriety of the coroner's determination to hold the inquest. Lord Denman says that the coroner puts nothing into his own pocket by making these payments, "he is merely the agent of the county treasurer in paying the money." In this case the judge allowed the expenses and fees disbursed by the coroner, but he disallowed the coroner's own fees, the inquest having been held where there was no occasion.

From all this we clearly learn: first, that the coroner has no jurisdiction whatever in the matter,—he is merely an agent to the county treasurer, in making certain payments, which are specified by act of parliament, and which it is compulsory upon him to make "immediately after the termination of the proceedings."

Secondly. A particular form of summons is directed by the same act of parliament, to enable the coroner to inflict a fine upon a medical man who, receiving such a summons, refuses to obey it; but does not give him any discretionary power to withhold either the medical or any of the other prescribed fees: for even the paltry subterfuge of summoning a medical man with the form directed for an ordinary witness, can avail him nothing: if he asks for his medical opinion he must give him his fee.

Mr. Lord erred in bringing his case before a county court. I accidentally met him the day before it was to be heard, and told him what had occurred in my case. He ought to have taken out a mandamus; and had Mr. Mills refused to follow the advice of the judge of the Bloomsbury County Court, I should most certainly have taken out a mandamus against him, by the advice of the same learned gentleman.

Every medical man, I am confident, will agree with me that, under the circumstances, I was perfectly justified in making the post-mortem examination at the time I did; and should I ever be placed in a similar situation, I should have no hesitation in proceeding with my examination. There is one part of Lord Denman's charge that ought to be strongly impressed upon the minds of all coroners, for they all, more especially those who happen to be members of the medical profession, avoid calling upon the medical attendant of the deceased for his testimony, except in cases where they cannot help it.

In conclusion, I should suggest to all

coroners the propriety of having the following words of Lord Denman's printed in letters of gold, handsomely framed, and suspended in the most conspicuous position in their offices:—"The propriety of requiring the presence of the medical attendant of the deceased in every case in which the death is proper to be inquired into at all, is so unquestionable as almost to amount to a necessity, and it is better, perhaps, to class it among the necessary expenses of a PROPER INQUEST."

I am, sir,

Your very obedient servant,

ROBERT SYNNOT.

76, Cadogan Place,
9th Feb. 1850.

* * We believe the "Medical Witnesses" whom Mr. Synnot answers, to be a medical myth, created *pro hac vice*, probably by the deputy-coroner or his substitute. Nevertheless, Mr. Synnot's remarks may be of some utility to *bond fide* medical witnesses.

ON THE MODUS OPERANDI OF COD-LIVER OIL.

SIR,—I beg to submit to your readers the following theory of the *modus operandi* of Cod-liver Oil. It is, possibly, neither correct nor original; but I formed it after a tolerably extensive observation of its action, both as furnished by the druggists and as prepared under my own direction. It is, that the curative action of this agent depends solely on its being easily digested, and consequently highly nutritious, and that this facility of being assimilated arises from its containing bile in sufficient quantity materially to assist its own digestion.

Should this view be correct, and should a substitute be required, any bland vegetable oil treated with fresh ox-gall or an alkali would form an analogous compound: Cod-liver oil, containing the quantity of bile requisite, in my opinion, to produce its most beneficial effects, should form readily an emulsion when agitated in a phial with cold water. To ensure a sufficient admixture of bile the contents of the gall-bladder should be preserved, and added to the oil after extraction.

In preparing the oil, I direct the livers to be cut into small pieces and exposed in an earthen vessel to a heat never exceeding that of boiling water.

Oil thus prepared, treated with sulphuric acid, strikes a pink, not a purple shade.

I am, sir,

Your obedient servant,

C. F. SLOAN, M.D.

Ayr, Feb. 13, 1850.

UNFERMENTED BREAD.

SIR,—In reference to your observations on unfermented bread, in your *GAZETTE* of the 8th inst., I agree with you that “the caution given by the publication of Dr. Henry’s letter was not uncalled for;” and I ought perhaps to explain that by the great London chemists I meant the *manufacturing* chemists of London. I cannot, of course, vouch for the purity of the muriatic acid sold by many of the *retail* chemists: I mentioned only one.

As to the advantages of the unfermented bread, provided the acid be pure, and due care used in regard to the proportions of acid and alkali, they are best set forth in page 11 of the pamphlet which I named in my former letter, and from which I will make one brief quotation. It “keeps much longer than common bread, is more digestible, and much less disposed to generate acid. Common bread, like every other thing that has been partially fermented, ferments easily again, to the great discomfort of many stomachs; and not only so, but, by acting as a *ferment*, it communicates a similar action to the food in contact with it, when the digestive power is too weak to control or counteract the chemical affinities, as ‘a little leaven leavens the whole lump.’ Unfermented bread, being free from this defect, is beneficial to those who suffer from headache, acidity, flatulence, eructations, a sense of sinking at the pit of the stomach, distension or pain after meals, and to all who are subject to gout or gravel.”

Having derived much relief myself from the use of this bread, it is natural I should wish for other invalids to partake of the benefit.—I am, sir,

Your obedient servant,
GEO. STOTHEBT.

Richmond Hill, Bath.
Feb. 14, 1850.

PROFESSOR J. W. WEBSTER.

WE omitted to mention last week that the Grand Jury of Suffolk County, after several days examination, returned a bill of indictment against Prof. J. W. Webster for the murder of Dr. Geo. Parkman. The mass of evidence collected by the Jury of Inquest was laid before the Grand Jury, but has not been made public. Dr. W. is yet to be arraigned before the Supreme Court, and the time fixed for his trial. Judge Merrick, of Worcester, and Mr. Sohier, of this city, it is understood, are engaged as his counsel.—*Boston Journal*.

Medical Intelligence.

CONVENTION OF POOR-LAW MEDICAL OFFICERS.

[A VERY long report of the proceedings of this Convention was forwarded to us for insertion in our last number; but, as it did not reach us until the evening before publication, we were obliged to postpone it. Even now we are compelled to give an abridgment of the Report which refers to the proceedings at an interview between the Poor-law authorities and a deputation of Poor-law medical officers.]

Mr. LORD, in introducing the subject of the meeting, reminded the President that when the deputation waited on him in May last, he admitted the just claims to relief for which the Union surgeons applied, but regretted that the means at his command were not equal to his willingness to remedy the evils so generally felt and loudly complained of. Mr. Lord, entering generally into the subject, commented particularly upon the letter in question, especially in relation to the infliction of extra work on medical officers during the cholera, and the gratuitous performance of sanitary duties quite beyond the letter and spirit of their contracts, through the conflicting orders of the Poor-law Board and the General Board of Health. The large amount of service thus rendered to suffering humanity, and the nation at large, by the Union surgeons, for a pecuniary return so insignificant, was altogether out of proportion to the means of the country and the benefits conferred. He referred to the important letter addressed to the President on the 23d July last, respecting his power to order better payment to medical officers, and quoted in evidence the words of the Act under which the Commission was originally formed, and also that of the 10th and 11th Vic., by which all the powers of the former were transferred to the present Poor-law Board. He then read the two last clauses of the above letter, and earnestly pressed on the notice of the Board the claims of the Union surgeons for speedy and efficient redress. Remembering the meed of praise which on a former occasion the President had bestowed on the medical officers, he quoted from the *Provincial Medical Journal* the following comment:—“They may accept the compliment with satisfaction as coming from a conscientious and well-informed gentleman; yet it may be a bitter reflection that this very excellence, this meritorious conduct of the Poor-law medical officers, is an obstacle in the way of their receiving that justice which they have so long

sought, and to which they are acknowledged to be so fully entitled. Were the work less well done, a remedy would the sooner be found. Did instances of neglect and inattention multiply, the evils of the present system would force themselves upon the attention of those who could adopt a remedy."

The PRESIDENT considered that he must, in some degree, have been misunderstood on the former interview respecting the power of the Board. He was quite aware of that power, and on many occasions it had been exercised favourably respecting the salaries of the medical officers; but with respect to cholera, and other epidemics, the Poor-law Board had not the power to lay down any prospective scale of remuneration for extraordinary services, but the power of granting a reasonable compensation on account of such services was vested in the guardians; and that, whenever an increase was proposed, the Board had always had much pleasure in confirming it. The general question of poor-law medical relief, with the scale of remuneration, was so beset with difficulties, owing to the discrepant interests of the parties concerned, that it appears more and more difficult of adjustment the more it is looked into.

After some remarks by Dr. Hodgkin and others,

Mr. ROSS said that there was a very general opinion in the profession, which had been also submitted in evidence before a committee of the House of Commons by men of great intelligence and experience, and assented to by the old Poor-law Commission, that an average payment of 6s. per case throughout the country would be an adequate payment. The committee had anxiously deliberated on this subject, and believed that the sum named was a tolerably accurate approximation to a fair standard of payment,—still they were not bound to adopt that amount exclusively; and, if the Poor-law Board would take this matter into its serious consideration, and collect the data whereupon to form an opinion, the medical officers would feel confidence in the efforts it might make, and render every assistance in their power to form a just estimate. Mr. ROSS further suggested that two elements in estimating the value of a case were population and area, as set forth in the resolutions of the Committee.

A discussion then took place upon the mode of striking a scale of payments upon the elements of population and area.

Mr. ROSS inquired whether the Board had it in contemplation to bring forward any measures of redress during the present session of Parliament.

The PRESIDENT replied that he was not in a condition to make any pledge that he would be able to do so.

Mr. ROSS then stated that it was very generally understood that the Poor-law Board were preparing a bill providing for a superannuation fund for Union officers; and, as the subject was one of the highest interest to the medical officers of unions, the deputation wished to be informed if they were to be included in the provisions of the bill?

The PRESIDENT replied that it was true such a measure had been in progress, but that he had not yet seen it. It was not intended, however, to embrace the medical officers within its provisions.

LORD ESKINGTON stated the principle of the bill was that of levying a per-centage upon the salaries for the purposes of a fund, and was of the nature of an insurance, on the same principle as was acted on in the Treasury and other offices.

Mr. ROSS stated that the Committee had not yet had an opportunity of consulting their constituents upon this point, although they felt it their duty to bring the claims of the medical officers under the consideration of the Board at the present interview; and meanwhile, perhaps the Board would devise a means of enabling the medical officers to receive the advantages of such a fund, if they should so wish, by admitting them to it as members at their option.

Mr. NICHOLS remarked that this view had suggested itself to them, and promised that consideration should be given to the subject.

The Poor-law Board considered that the readiness with which medical men sought the appointments presented a formidable difficulty to further burthening in these times the rates.

The PRESIDENT having incidentally made allusion to the Queen's speech in reference to sanitary improvements,

Mr. LORD took leave pointedly to inquire of the President if, in his opinion, a union of poor-law duties and sanitary obligations might not be carried out under the General Board of Health, so as to combine justice to the medical officers, and advantage to the nation, with a wholesome regard to finance.

The PRESIDENT begged to be excused expressing an opinion on this point.

Much conversation having ensued on the subject generally, the President stated that he was not in a position to pledge himself to any particular course, observing that great difficulties were in the way of a satisfactory adjustment of the question.

REPORT OF THE COUNCIL OF THE ROYAL
COLLEGE OF SURGEONS TO THE COUNCIL
OF THE NATIONAL INSTITUTE OF MEDICINE,
SURGERY, AND MIDWIFERY.

GENTLEMEN,—

1. In addressing the Council of the National Institute, the Council of the College of Surgeons desire to express their regret that they cannot adopt the views set forth in the "Suggestions" of Mr. Bottomley, as Chairman of the Committee of Associated Surgeons of England.

2. The Council of the College, thinking it unnecessary to consider the details of the measure therein proposed for the amendment of the Charter of the College of Surgeons, are of opinion, that the admission of surgeons in general practice to the Council of the College, would, in converting the College of Surgeons into a College of General Practitioners, prove to be injurious to the best interests of the profession and of the general practitioners inclusively.

3. They believe that the College would then cease to be regarded as the institution especially designed for the promotion of scientific surgery; and that by admitting to the Council others than those who, as surgeons of hospitals, teachers, eminent practitioners, or original inquirers in surgery, maintain its scientific character, the diploma of the College would lose the high estimation which has hitherto induced those preparing themselves for general practice to seek it voluntarily, as the best guarantee of their surgical qualifications and professional character.

4. They cannot, therefore, consistently with the object for which the College of Surgeons was instituted, consent to any proposal for introducing into the Council those who practise pharmacy.

5. The Council of the College are no less adverse to the proposal of instituting a "National College of Medicine and Surgery," intended more or less to supersede the Colleges of Physicians and Surgeons, and the Society of Apothecaries. They are convinced that the proposal of the Chairman of the Associated Surgeons—viz. "That the new College must be independent of all others, and must possess the right of granting diplomas in medicine and surgery, which shall entitle the holders to practise in all the departments of medical and surgical science, and to fill all government and public appointments"—tends inevitably to abolish those distinctions which have been hitherto beneficially recognised as marking the relative claims of medical practitioners to the confidence of the public, and which, by preserving the highest standard of education in those who

have the means of attaining it, maintain and elevate the character of the whole profession. And they especially hold that it would most injuriously affect the interests of every one calling himself a medical practitioner, to diminish the authority or contract the influence of the College of Physicians, seeing that the general character and respectability of the profession not only depends greatly upon the character of those who are distinguished members of it, but that the Fellows of the College of Physicians have ever been distinguished by the same education and training as the gentry of the country, by their learning and attainments in literature, by the aid which they have given to the progress of science, and by their association with the learned and scientific bodies of the metropolis.

6. Further, the Council of the College, in relation to the amended Charter proposed by the chairman of the Associated Surgeons, are bound to state that they have assented to certain "Heads" or "Principles," agreed to at the Conference held at the College of Physicians, conjointly with the representatives of the College of Physicians, of the Society of Apothecaries, and of the National Institute, and designed to be incorporated as a bill for the regulation of the profession; and as this bill is intended to provide for the institution of a College of General Practitioners, they are precluded by their present engagements from re-opening the question of any organic reform in the constitution of the corporate bodies of the medical profession.

7. At the same time, the Council of the College take leave to impress on the attention of the Council of the National Institute, that the College of Surgeons can, in fairness, be held responsible for the performance of such engagements *only* under the acknowledgment by the other contracting parties, and in this instance by the National Institute, of their reciprocal responsibility.

8. The College of Surgeons consented originally to the institution of a new College, as one "for the more efficient performance of the duties confided to the Society of Apothecaries."

9. That the "Principles" of the bill in question were framed in accordance with this intention, is incontestably proved by the provision that no one shall be registered as a general practitioner unless he "shall also have been examined and admitted as a member of the Royal College of Surgeons."

10. If, then, according to the provisions of the projected bill, no one can be licensed for "——— practice," except by possessing "———,"—that is, letters testifying of Surgeons, and

letters testimonial from the College of General Practitioners,—the Council need not point out the inevitable conclusion, that the object of the bill ever has been, that the qualification in surgery shall be determined by the College of Surgeons, and the qualification in other branches of medicine by the College of General Practitioners; and that it never could have been contemplated to transfer from the College of Surgeons to the proposed College of General Practitioners the *legal right*, or *any part of the legal right*, of regulating the education of surgeons, of instituting examinations of their qualifications, and of granting to them letters testimonial of their fitness to practise surgery.

11. Nevertheless, it cannot be doubted by the Council of the College, after a careful consideration of the proceedings of the National Institute, in connection with the conference held at the Hanover Square Rooms, on the 20th of November, together with expressions reiterated in their third annual report of August 1849, that it is the intention of the National Institute to obtain, if possible, the right of regulating the education of surgeons, and of inquiring by examination into their qualifications for practice, in the charter which they seek to obtain from her Majesty for incorporating their association under the style and title of a royal college. And the Council of this College feel it incumbent on them to declare that, consistently with their oaths and their duty to the public, they cannot surrender any portion of the right and privileges which they possess, of being the sole public body in England entitled to regulate the education of surgeons, and to authorise them to practise surgery throughout her Majesty's dominions; and therefore the Council feel not only justified but called upon to require that the College of General Practitioners shall, in conformity with the practice of the College of Surgeons and the Society of Apothecaries, state in their diploma, a certificate of qualification, the subjects on which their members or licentiates shall have been examined and found qualified—viz. medicine, pharmacy, and midwifery.

12. Considering, moreover, that the Council of the Royal College of Surgeons have taken steps which are publicly known to be in progress for the removal of those grievances declared both by the National Institute and the Associated Surgeons to have been the cause of their original formation, the Council of the College might rather have expected that the incorporation of any new medical body, to be endowed with surgical privileges, would have been deemed unnecessary; but at all events they will consider it to be their duty to oppose

every attempt which may be made, either by the National Institute, the Associated Surgeons, or any other body of gentlemen, to usurp the rights and privileges of the Royal College of Surgeons, whether it be sought to be accomplished by means of a charter or by an act of parliament.

13. Finally, if it were thought advisable that any alteration should be made in the measures projected, and now in progress, for the re-organization of the medical profession, the Council of the College of Surgeons have no hesitation in saying that they would greatly prefer to the establishment of any new corporate body, that the examinations into the medical qualifications of general practitioners should be entrusted to the College of Physicians, as more consonant with the dignity and interests of the profession, and especially of the general practitioners; and should the College of Physicians and the Society of Apothecaries agree in the requisite preconditions, the Council of the College of Surgeons would cordially concur in a plan for a re-construction of the medical profession, which they deliberately and conscientiously believe would best conduce to the peace and permanent well-being of the profession, whose efficiency is inseparably associated with the needs and welfare of the country.

I have the honour to be,

Gentlemen,

Your most obedient servant,

EDMUND BELFOUR,

Secretary.

Royal College of Surgeons of England,
February 5, 1850.

PROPOSED NEW REGULATIONS OF THE ROYAL COLLEGE OF SURGEONS REGARDING THE ADMISSION OF OLD MEMBERS TO THE FELLOWSHIP WITHOUT EXAMINATION.

To admit to the Fellowship, upon payment of the usual fee of ten guineas, those gentlemen who were members of the College at the date of the Charter of her present Majesty, and of twenty years' standing, who shall be desirous thereof, and shall be recommended to the Council by six Fellows.

That the following be the terms of such recommendation, viz.—

We, the undersigned Fellows of the Royal College of Surgeons of England, do, from our personal knowledge of the high moral character and professional attainments of A. B., of C., declare, that, in our opinion, he is deserving of the honour of the Fellowship, and that he does not openly trade in medicines. We therefore recommend the said A. B. to the Council, to be admitted a Fellow of the College.

That members in the Army and Navy be admitted to the Fellowship under the like conditions, their certificate and recom-

mentation being to the same effect, and signed by six Fellows, or by the heads of the medical department of the respective services.

That members in the service of the East India Company be admitted to the Fellowship under the like conditions, their certificate and recommendation being to the same effect, and signed by six Fellows, or by the Secretary of the Military Department of the Company.

That members resident in the Colonies be admitted to the Fellowship under the like conditions, their certificate and recommendation being to the same effect, and signed by six Fellows, or by the governor of the colony, and certified by the Colonial Secretary.

That the application of every member for admission to the Fellowship, in the manner above provided for, shall be accompanied by a declaration, signed by himself, that he does not openly trade in medicines.

That this Council do, from year to year, admit to the Fellowship, under the foregoing conditions, the members of the College at the date of the Charter of her present Majesty, as they shall respectively become members of twenty years standing, until the whole of the list of members at that date shall be gone through.

That when the sanction of Sir George Grey shall be obtained to such proposed application to the Crown, the several foregoing resolutions be made public, in such manner as the President shall direct.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.

A MEETING of the governors of this institution took place on Monday, Feb. 11th, at the Hospital, Bloomfield Street, Moorfields—the Rev. John Russell, D.D., in the chair. The accounts showed that the receipts for the year, consisting of £265 dividends from stock, and £1273.2s. from subscriptions and donations, with return of income tax, amounted to £1539.1s. 1d., and their expenditure for the same period amounted to £920. 5s., leaving a balance in favour of the charity of £618.16s. 1d. The number of out-patients for the year amounted to 8118, which, with 262 attended at their own houses and in the hospital, made the total number 8686. This was an increase on the previous year of 36. The report was adopted; and votes of thanks having been accorded to the medical staff and the chairman, the meeting separated.

PECUNIARY VALUE OF MEDICAL SCHOOLS.

In Dr. Mitchell's lectures at the Jefferson Medical College, the fact is stated that the

schools of medicine in Philadelphia add annually, directly and indirectly, *one million of dollars to the income of the city*. No objections are made by the citizens to the increase of institutions that give to them such direct thrift. No such trouble attends the petition for another charter in Pennsylvania, as is experienced in other States, where every possible effort is made to prevent the creation of a rival college. The more they have in Philadelphia, the more commanding is the influence of the whole. There is no lack of students; and we are informed that there is quite an army of them the present winter. Let New York and Boston have three or four more schools of medicine, and they would be astonished at the immediate increase of patronage. Whether such an increase would be for the good of the public generally, or of the profession, is wholly another matter.—*Boston Journal*.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, February 14th, 1850:—William Henry Thornton, Thornhill, near Dewsbury—George Hornby, Pocklington, Yorkshire—Geo. Philip Rugg, Maidstone—William Hughes, Market Place, Llanwrst, N. W.—William Tidmas, Manchester.

OBITUARY.

FEBRUARY 9th, Richard Lowe, Esq., Senior Surgeon to the Bristol Infirmary.

February 11th, at his residence, Church Lane, Handsworth, George Swinson, Esq., in the 86th year of his age. The deceased gentleman passed his examination at the Royal College of Surgeons April 5th, 1787.

On the 24th ult., at his residence, 14, Albion Street, Hull, Robert Craven, Esq., F.R.C.S.E., surgeon to the Hull General Infirmary, and lecturer on surgery at the Hull and East Riding School of Medicine and Anatomy.

On the 14th inst., at Park Place, Chelsea, aged 82, Thomas Dixon, Esq., for many years surgeon of the Hereford Regiment.

On the 15th inst., at his residence, Medina Cottage, Newport, Isle of Wight, Dickens Buckle, Esq., Deputy Inspector-General of Hospitals, in his 88th year.

POLITICAL CHANGES A CAUSE OF INSANITY.

It is a rational opinion, which we believe is confirmed by statistics, that a strong and orderly government is conducive to the mental well-being of the citizens who live under its authority. Times of licence and anarchy may perhaps be favourable to the

display of individual genius, but the steady development of common talent takes place only amidst order and tranquillity. A certain amount of bodily ease and mental composure is required by the majority of mankind, and without it there can be no application, and no real attainment. Change and uncertainty are inimical to all pursuits which require slow and assiduous labour; for repose is so pleasing to our nature, that no man would voluntarily persist in working, unless there existed a reasonable prospect of his ultimately obtaining the reward of his perseverance. Firmly constituted governments, in which personal freedom is secure and property respected, guarantee to their citizens the safe enjoyment of the fruits of their exertions, be they wealth, station, or honours; but revolutionary states afford no such assurance,—in them all is uncertain and insecure.—*Journal of Psychological Med.*

BOOKS & PERIODICALS RECEIVED FOR REVIEW.

Corrispondenza Scientifica in Roma. Bullettino Universale, No. 16. 23 Gennajo.

El Observador Periodico de Ciencias Medicas y Naturales, No. 3. Barcelona, 30 Enero, 1850.

Casper's Wochenschrift, 1849. No. 52. 1150, No. 1 and 2. 5 and 12 Januar.

An Appeal to the Public in behalf of a Hospital for Sick Children.

Preface to the Regulations of the Court of Examiners of the Society of Apothecaries. 1850.

An Inquiry how far Consumption is curable, and Cases illustrating the Efficacy of Cod Liver Oil, &c. By James Turnbull, M.D.

On the Causes of the Success of the English Revolution, 1640-1688. By M. Guizot.

* * This is a most interesting essay in an historical point of view. We regret to find from the preface that the wholesale system of piracy which is now in vogue is likely to put a stop to the translation of standard foreign works.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Feb. 16.

BIRTHS.		DEATHS.	
Males....	724	Males....	483
Females..	732	Females..	455
	1476		938

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.75

Thermometer 42.8

Self-registering do. Max. 0.0 Min. 19.

From 12 observations daily. Sun.

RAIN, in inches, .53.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 42.8 above the mean of the month.

CAUSES OF DEATH.

ALL CAUSES	938
SPECIFIED CAUSES	935
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	144
Sporadic Diseases, viz.—	
2. Dropsy, Cancer, &c.	41
3. Brain, Spinal Marrow, Nerves, and Senses	110
4. Heart and Bloodvessels	37
5. Lungs and organs of Respiration	199
6. Stomach, Liver, &c.	63
7. Diseases of the Kidneys, &c.	12
8. Childbirth, Diseases of Uterus, &c.	10
9. Rheumatism, Diseases of Bones, Joints, &c.	8
10. Skin	1
11. Old Age	42
12. Sudden Deaths	15
13. Violence, Privation, Cold, &c....	23

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox	6	Convulsions	39
Measles	21	Bronchitis	88
Scarlatina	13	Pneumonia	75
Whooping-cough	31	Phthisis	112
Diarrhoea	18	Lungs	6
Cholera	0	Teething	10
Typhus	29	Stomach	4
Dropsy	17	Liver	14
Hydrocephalus	36	Childbirth	8
Apoplexy	10	Uterus	2
Paralysis	25		

REMARKS.—The total number of deaths was 103 below the average mortality of the tenth week of ten previous years.

NOTICES TO CORRESPONDENTS.

Bingraziamo i nostri amici a Roma per la loro cortesia nel mandarci la *Corrispondenza Scientifica*, No. 16, del 23 Gennajo. Ci fa molto dispiacere che non possiamo accordare un cambio. Intanto daremo fra poco una notizia del numero già ricevuto.

We must apologise to Dr. Soltan and Mr. Trayer for again postponing their papers. We can promise their insertion in the next number.

Dr. Thomas Williams, Swansea.—The communication has been received, and will be inserted. Mr. McWhinnie's very interesting Account of a Dissection of a case of Malformation of the Urinary Bladder will appear in our next.

The City County Court.—It is not our practice to send reporters for such purposes; but we shall be glad to insert a short abstract of the case if forwarded by our correspondent.

Dr. Dewees's case of Rheumatic Fever shall be inserted.

Mr. R. H. A. Hunter, Clifton, Bristol.—We have the number referred to. We will compare the notice, and then determine upon the insertion of the article.

Nitric Acid in the Treatment of Hemorrhoidal Tumors.—We have received a letter on this subject, from which it appears that the writer has been completely cured by the local application of Nitric Acid as an escharotic. If the correspondent who has forwarded this letter, will send a short account of the case, with a description of the mode of applying the acid, we shall be happy to insert it. The letter itself is inadmissible.

Corrigendum.—At page 307 of our last number, in the paragraph respecting Dr. F. Winslow, "Royal College of Physicians" should be substituted for "Royal College of Surgeons."

Lectures.

COURSE OF LECTURES

ON

DISEASES OF THE HEART.

Delivered at St. Vincent's Hospital during the Session 1849-50.

By O'BRYEN BELLINGHAM, M.D.

Fellow of, and Professor in, the School of the Royal College of Surgeons in Ireland, and one of the Medical Officers of the Hospital.

LECTURE V.

Motions of the heart—Motions of each of its cavities—Auricular systole and diastole—Ventricular systole and diastole—Order of succession of the heart's motions—Duration of the several movements of the heart—Period of repose of the heart—Frequency of the heart's action, and of the pulse—Effects of posture on the pulse—Cause of the influence of change of posture on the pulse—Ratio of the pulsations of the heart to the respirations—Rapidity of the passage of the blood through the heart—Force with which the blood is propelled by the left ventricle.

Motions of the heart.—The heart we have seen to be composed essentially of muscular tissue. As a muscular organ, it is adapted to perform certain motions. These consist in alternate contractions and relaxations of its muscular fibres; but the heart being a hollow viscus, and divided in its interior into distinct chambers, the contraction and relaxation of its muscular parietes must necessarily occasion the diminution and enlargement of its cavities, and of course react upon the blood they contain. The ventricles are the parts of the heart upon which the circulation mainly depends; the auricles (as was remarked by Hunter) are to be considered rather as reservoirs, "capable of holding a sufficient quantity of blood to supply the ventricles, and ready always to fill them as they are in need of it."

The function of the heart, it is scarcely necessary to observe, is the circulation of the blood; it is the principal agent in this important process; and, as life depends upon its regular and constant action, the motions of the organ are altogether independent of the will. The heart, therefore, considered as a muscular viscus, belongs to the class of involuntary muscles, its movements being not only uninfluenced

by the will of the individual, but carried on without his consciousness.

The manner in which the motions of the heart are performed, the order in which they succeed each other, and the phenomena which characterise its movements, have been determined by an examination of the heart in animals, where the parietes of the thorax had been removed and the heart exposed, the animal having been previously deprived of sensation, and artificial respiration kept up. The opportunity has likewise been occasionally afforded of examining this organ in the human subject in certain rare cases of congenital malformation, where the infant was born with a deficiency of the anterior parietes of the thorax, and the heart presented itself naked and uncovered to the view. Few parts of our subject have been more frequently or more carefully investigated than this, and there are few upon which a greater amount of time, labour, and talent, have been bestowed.

The motions of the heart consist, as I have said, of alternate contractions and relaxations of the parietes of its several cavities. The contraction of the ventricles, or their systole, as it is commonly termed, constitutes their active state; as soon as this ceases the muscular tissue relaxes, their cavities enlarge, and return to a state of fulness; when the ventricle is said to dilate, or its diastole, as it is termed, occurs. By the ventricular systole the blood is propelled into the aorta and pulmonary artery: as the ventricles re-expand, the blood, favoured by gravity, passes in a full stream from the auricles into the ventricles, to be again expelled when the ventricular systole ensues.

From the Report of the Committees of the British Association for 1838-39 and 1839-40, it appears that "the visible systolic and diastolic motions are first perceived at the bases or fixed parts of the cavities; viz. in the auricles at the sinusses, and in the ventricles at the fundus cordis; and that the apices of the auricles and ventricles, or free parts, are brought into full action after the others, and only just before the supervention of the opposite and next succeeding condition of the cavities respectively, whether that condition be systole or diastole."

It will now be necessary to consider separately the motions of each of the cavities of the heart.

Auricular systole.—The systole of the auricles is a quick, short, sudden motion. Lower says its rapidity equals the explosion of gunpowder. It immediately precedes the ventricular systole, the one motion appearing to be propagated into the other. It commences in the sinus, and

extends to the appendix, but by a very minute interval. According to some authorities, it is first observed in the appendices. In feeble states of the heart's action it becomes vermicular.

The auricular systole is most apparent in the appendices, and is very feeble compared to that of the ventricles. By it a small additional quantity of blood is propelled into the ventricles; but its contraction is too slight either to empty the auricular cavities or to cause the dilatation of the ventricles. In the majority of cases, likewise it is too feeble to produce sound. Nevertheless, in some of the experiments of the Committee of the British Association, and in those conducted in America by Drs. Pennock and Moore, sound, though faint, was sometimes heard, which, in a great degree, merged into that of the ventricular systole, but still was real. The auricular systole occurs towards the end of the period of repose of the heart; its duration is about the eighth part of an entire beat of the heart.

Auricular diastole.—The diastole of the auricles is a passive movement; these cavities are gradually and progressively distended, from the sinus to the appendices, by the blood which enters from the venæ cavae and pulmonary veins. It continues from the termination of one auricular systole to the commencement of the next, so that it persists through the systole of the ventricles, during their diastole, and during part of the interval of repose. M. Cruveilhier states, that the right auricle during its diastole (in a case of ectopia of the heart, which he had the opportunity of examining), seemed ready to burst, so distended was it, and so thin its parietes: the left did not exhibit the same appearance, at least so decidedly. The duration of the diastole of the auricles is about seven-eighths of an entire beat of the heart.

Ventricular systole.—The systole of the ventricles is a gradual, progressive, and gliding movement, and performed with great force: it commences suddenly, instantly succeeding the auricular systole, so that the one movement appears to be propagated into the other. During their systole the parietes of the ventricles become pale, hard, and convex; the vertical and transverse diameters are diminished, the apex is approximated to the base, and describes a spiral motion from right to left, and from behind forwards, coming in contact with the parietes of the thorax between the cartilages of the fifth and sixth ribs on the left side, where the impulse of the heart is felt. Dr. Sibson* (in some experiments made by him) says, the ventricles in con-

tracting, felt "like the pushed, revolving point of a pencil." "Wherever (he observes) "the junction of the left ventricle to the auricle could be observed, the apex and base of the ventricle were seen to approach each other steadily during the whole systole; so that, at the end of the systole, the apex was about the third of an inch nearer the left auricle than at the beginning, and the aorta was drawn downwards about a quarter of an inch."

In the experiments performed by Drs. Pennock and Moore,* the apex of the left ventricle was not observed to be approximated to the base during its systole. The expulsion of the blood from the ventricles (they observe) is effected by an approximation of the sides of the heart only, and not by a contraction of the apex towards the base: during the systole, the heart performs a "spiral movement, and becomes elongated." All other observers have, however, noticed the shortening from above downwards of the ventricular portion of the heart during the systole; and from the manner in which the fleshy columns of the valves are inserted, such would appear to be essential to the perfect action of the auriculo-ventricular valves, when the ventricles contract.

The phenomena presented by the systole of the ventricles have been well described by M. Cruveilhier,† as observed by him in a case of ectopia of the heart, in an infant which lived for about fourteen hours.

"During their systole the ventricles become pale, their surface wrinkled, the superficial veins swollen, and the spiral fibres which form the apex of the heart become more evident. At the same time the ventricles diminish in all their diameters, the appearance of shortening being most perceptible in the vertical diameter."

"During the systole of the ventricles, the apex of the heart (that is, of the left ventricle) describes a spiral or turnscrew motion from right to left, and from behind forwards. This spiral movement is slow, gradual, and, as it were, successive; and it is to it that the impulse of the apex of the heart is due. The ventricular systole is not accompanied by a motion of projection of the heart forwards: it is the spiral contraction exclusively which projects the apex of the organ against the parietes of the thorax."

The ventricles do not appear to empty themselves completely during their systole; this, however, cannot be ascertained with certainty, owing to the thickness of their parietes; but, as Dr. Hope observes, the diminution of their volume is not in general

* Trans. of Prov. Association, vol. xii.

* Medical Examiner, Nov. 1839.

† Gazette Médicale.

so great as to convey the impression that they do. During the ventricular systole the blood is propelled with considerable force into the arterial orifices: the first sound of the heart is heard, and the impulse and pulse are felt. The systole of the ventricles occupies about one-half the period of an entire beat of the heart: that is, it is as long as the diastole, and the period of repose together, and is double the length of the ventricular diastole.

Ventricular diastole.—The diastole of the ventricles instantly succeeds the systole; it is a sudden and instantaneous movement; in it the ventricles increase in all their dimensions, the apex recedes from the base, the heart becomes elongated, the surface smooth, and it assumes the shape and position which it had previous to the systole. This movement of the heart has been divided into two stages; “the first, which immediately follows the ventricular systole, is sudden, the apex being pushed downwards, and *apparently* passing deeper into the chest, and is occasioned by the return of the heart to its state of rest.” “The second is also sudden, and attended by a rapid but not very extensive enlargement of the heart in all its dimensions.” The force with which the ventricular diastole is accomplished is very considerable: in large animals, the hand grasping it is forcibly opened.

M. Cruveilhier gives the following account of the phenomena observed by him in the case of the infant before alluded to:—

“The ventricular diastole was sudden and instantaneous; the ventricular cavities became filled, swelled out, elongated, and the apex was projected downwards: it seemed at first sight as if this constituted the active movement of the organ, so rapid and energetic was it. One forms no idea of the force with which the dilatation overcomes any pressure upon the heart; the hand closed round it is violently opened.”

“The ventricular diastole is accompanied by a movement of projection of the heart downwards, which was carried to the maximum when the infant was placed vertically. This motion was so decided that at first I was inclined to think that it was during the ventricular diastole that the impulse of the heart against the thoracic parietes occurred.”

During the ventricular diastole the blood passes in a full stream from the auricles into the ventricles: it is not impelled by the auricles, neither is it the entrance of the blood which causes the ventricles to dilate; the utmost force of the auricular contraction could not cause the dilatation of the ventricles. Besides, the auricular systole does not occur until after the ven-

tricular diastole. The duration of the diastole of the ventricles is brief compared to that of the systole, being about half the length of the former movement, and about one-fourth of the period of an entire beat of the heart; the second sound of the heart is synchronous with it.

Order of succession of the heart's motions.—The systole precedes the diastole in both the auricles and ventricles. The systole of the right and left auricle is synchronous, as is their diastole. The systole of the two ventricles is also synchronous, as is their diastole.

The systole of the auricles occurs during the latter part of the period of repose of the ventricles. The diastole of the auricles occupies the remainder of the period of repose of the ventricles, and the entire period of the ventricular systole and diastole. The systole and diastole of the ventricles occurs at the same period as the auricular diastole.

The order in which these several motions succeed each other is as follows:—

1. The auricular systole.
2. The ventricular systole.
3. The ventricular diastole.
4. The period of repose of the ventricles; during the latter part of which period the auricular systole occurs again.

From the termination of the diastole of the ventricles until the commencement of the next systole, “the ventricles are in a state of perfect repose, their cavities remaining full but not distended.”

If the duration of the movements of the ventricles be divided into four equal periods, the ventricular systole would occupy about two; the ventricular diastole something more than one; and the interval of repose something less than one. Or in portions of a second, the ventricular systole would occupy about half a second; the diastole a little more than a quarter of a second; and the period of repose something less than the quarter of a second: and if represented on paper would be as follows:—

Ventricular systole . . . —————
 Ventricular diastole . . . —————
 Period of repose . . . —————

If the duration of the movements of the auricles be divided into eight equal parts, the auricular systole would occupy about one-eighth; their diastole the remaining seven-eighths: the auricular systole occupying part of the period of the repose of the ventricle; the auricular diastole occupying the remainder of the period of repose, as well as the period of ventricular systole and diastole.

Period of repose of the heart.—When the heart's action is very rapid, the alter-

nate movements succeed each other so quickly that there appears to be no interval of repose. On the other hand, when it is very slow, two distinct intervals are distinguished—one short, between the systole and the diastole of the ventricles; the second longer, between the diastole and the next succeeding systole. The first of these intervals M. Gendrin proposes to call the *peri-systole*; the second, the *peri-diastole*. M. Volkmann states, that by employing a second's pendulum (the oscillations of which could be regulated at pleasure) he found the interval between the first and second sounds to bear to that between the second and first next sound the ratio of 96 to 100: "the intervals were, therefore (he observes), almost equal, although, in the ordinary mode of examining the heart, this does not appear to be the case."

When the heart is beating with moderate frequency, but one distinct interval is perceived, which follows the ventricular diastole, and continues until the next succeeding systole. This is the pause in the heart's motions, or the interval of repose of the heart, and it corresponds to the *peri-diastole* of M. Gendrin. It occupies, as we have seen, nearly one fourth part of an entire beat, which would give about six hours' rest out of the twenty-four to the muscular fibres of the ventricles. But, as the muscular fibres of the ventricles are relaxed during their diastole, the period occupied by it may be added, which will make the period of repose or rest of the ventricles one half the time of an entire beat, or twelve hours out of the twenty-four, which was the period assigned by Laennec. As the auricular systole occupies only one-eighth part of an entire beat of the heart, and the diastole the remainder, the auricles (if the period of their diastole be considered as a state of repose) may be said to be at rest for twenty-one out of the twenty-four hours.

Frequency of the heart's action, and of the pulse.—The rapidity of the heart's action is not the same at every period of life: it varies also according to the sex, the temperament, and the idiosyncrasy of the individual: it differs at different periods of the day, and in different positions of the body, and it is remarkably influenced by affections of the mind.

In the female the heart's action is more rapid than in the male; the pulse of the adult female exceeding in frequency the pulse of the adult male, of the same mean age, by from nine to ten beats. According to Dr. Guy,* "the average pulse of the adult male may be stated at 70; that of the

adult female at 81." "The female pulse (he observes) differs little from the male pulse during the first seven years of life; but after seven years of age the mean pulse of the female exceeds that of the male by from six to fourteen beats, the average excess being nine beats."

In early life the heart's action is much more rapid than in the adult; and in the adult it is somewhat more rapid than in advanced life. Thus, while in infancy the number of the pulsations of the heart averages from 120 to 140 in a minute, the number in old age is usually between 50 and 70. The following table, given by Müller,* shows the average frequency of the heart at different ages:—

In the embryo the number of	
beats in a minute is	150
Just after birth	from 130 to 140
During the first year	115 " 130
" " second year	100 " 115
" " third year	90 " 100
About the seventh year	85 " 90
" " fourteenth year	80 " 85
In the middle period of life	70 " 75
In old age	50 " 65

It was formerly supposed that the rapidity of the heart's action gradually and progressively diminished from birth upwards; that it was quickest soon after birth; and that there was a gradual and sensible diminution in its frequency after that period. The remarkable fact has, however, been ascertained, that the pulse of the infant soon after birth is not unfrequently as slow as that of the adult. M. Billard† first called attention to this phenomenon, which has also been investigated and corroborated by M. Valleix.‡ According to him, the mean frequency of the pulse in thirteen healthy infants, from two to twenty-one days old, when asleep, averaged 87 in a minute; when awake, from 90 to 100: but it was readily excited by motion or emotion. From the seventh to the twenty-seventh month, the average was 119 for the male, and 124 for the female infant; and it continued a little above 100 up to the age of six years.

According to Mr. Gorham,§ the mean frequency of the pulse in sixteen infants under one day old was 123; in forty-two observations on infants from one to seven days old, the average was 128. Dr. Guy says, the observations of M. Billard and Valleix are by no means borne out by his experience. "There is reason to believe (he thinks) that these low frequencies of the pulse of infants occur in that state and

* Elements of Physiology, vol. i.

† Traité des Maladies des Enfants.

‡ Mem. de la Soc. Méd. d'Observation, T. 2.

§ MEDICAL GAZETTE, Vol. xxi.

* Cyclopædia of Anatomy and Physiology.

degree of debility, without disease, which gives rise to an infrequent pulse in the adult, and that they do not occur in strong and vigorous health."

The heart's action is less rapid during sleep than when awake; this is probably connected in some measure with posture. The decrease in frequency of the heart's action occasionally observed in the fetus in utero, has been attributed to the sleep of the embryo. The action of the heart is much slower when the individual is at rest than during or after bodily exertion. Dr. Bryan Robinson* states that the pulse of the adult, which ranged when at rest from 64 to 74, rose to 100 when walking at the rate of two miles an hour; to 140 when walking at the rate of four miles an hour; and when running fast, to 150 or more.

The heart's action is usually slightly accelerated after meals, particularly after the use of warm or spirituous liquors; and, contrary to the opinion at one time entertained, it is perceptibly quicker in the morning than in the evening. Dr. Knox,† who was the first to establish this fact, says the pulse is quicker by eleven beats, on an average, in the morning than in the evening. Dr. Guy's‡ experiments corroborate those of Dr. Knox. In the article "Pulse," in the Cyclopædia of Anatomy and Physiology, he has given a series of tables showing the diurnal variations of the pulse in the two sexes: "the facts contained in which may (he observes) be taken to establish the general law first set forth by Dr. Knox, that the pulse is less frequent in the evening than the morning; but it is obviously subject to numerous exceptions."

Effects of posture on the pulse.—Posture has a remarkable influence upon the rapidity of the heart's action: it is more frequent in the sitting than in the recumbent posture; and more frequent in the erect than in the sitting posture. Attention was first called to this remarkable fact above a hundred years ago, by Dr. Bryan Robinson, of Dublin, in his "Treatise on the Animal Economy." In the third edition of this work, published in the year 1738, he states that the pulse, which in the recumbent posture was sixty-four, rose to sixty-eight in the sitting posture, and to seventy-eight in the erect posture. The late Dr. Macdonnell, of Belfast, so long ago as the year 1784, determined experimentally this influence of change of posture on the pulse; he termed it "*the differential pulse*;" the results of his observation were communicated to the profession at

the meeting of the British Association, in Dublin. This phenomenon has also been investigated with much care by Dr. Graves of Dublin, by Dr. Knox of Edinburgh, and by Dr. Guy of London.

According to Dr. Graves,* the difference between the pulse in the erect and recumbent posture in the healthy adult is from six to fifteen beats in a minute: "if the pulse is but sixty, the difference is generally not more than six or eight, and this difference increases with the frequency of the pulse at the time of the experiment: thus, if it has been raised to 90 or 100 by moderate exercise, it is not unusual to find the difference twenty or thirty." That it is not the muscular exertion necessary to raise the body from the recumbent to the erect posture which occasions this difference, was proved by Dr. Graves, by altering the position without the necessity of any muscular exertion on the part of the person experimented on. He tried also the experiment of inverting the position, placing the person with the head downwards and the feet in the air: the frequency of the pulse was not, however, altered, but its strength diminished often very considerably, and it not unusually became irregular.

Dr. Knox† has shown that the increase in frequency of the pulse occasioned by change of posture, is different at the different periods of the day. "During the morning the mere change of the posture from the horizontal to the erect will increase the pulse by about fifteen or twenty beats; at midday this increase will be ten; and in the evening only four or six."

Dr. Guy instituted an elaborate series of experiments to determine the alterations effected on the pulse by change of posture. The following are some of his conclusions‡ under this head:—

"1. In the healthy adult male the mean Nos. of the pulse are—standing, 79; sitting, 70; lying, 67.

"2. In the healthy adult female the Nos. are—standing, 89; sitting, 82; lying, 80.

"3. In both sexes the extremes are very remote from the mean results, and the exceptions to general rules very numerous.

"4. In both sexes, also, the effect of change of posture increases as the frequency of the pulse increases.

"5. The effect of change of posture on any given frequency of the pulse is much greater in the male than in the female.

"6. The effect of change of posture on the pulse is greater in the forenoon than in the after part of the day.

* Treatise on the Animal Economy, 3d edit.

† Ed. Med. and Surg. Jour. vol. xi.

‡ Guy's Hospital Reports, No. ix.

* Clinical Medicine, 2d edition.

† Edin. Med. and Surg. Journal, Vol. xi.

‡ Cyclop. of Anat. and Physiology—art. Pulse.

"7. The inverted posture of the body lessens the frequency of the pulse.

"8. The varying frequency of the pulse in different postures of the body is due to muscular contraction."

In states of debility, as in patients recovering from fever, the difference between the frequency of the pulse in the erect and recumbent postures becomes (Dr. Graves observes) a useful guide in the treatment: "the greater the difference the greater the debility." In hypertrophy, with dilatation of the ventricles, on the other hand, Dr. Graves found the pulse to be very little altered with respect to frequency on changing the position. In anæmic and chlorotic females, and in individuals who have suffered from profuse hæmorrhage, I have observed that the difference between the frequency of the pulse in the recumbent and sitting posture is very marked; but these morbid states are always accompanied by more or less debility; and the pulse, in respect to frequency, is always above the normal standard.

Cause of the influence of change of posture on the pulse.—With respect to the cause of this alteration in the frequency of the pulse in different positions of the body, writers are not agreed. Dr. Guy refers it exclusively to muscular contraction; by others it has been attributed to the altered position of the heart, its valves and orifices, in the different positions; while Dr. Graves says "he cannot advance even a plausible conjecture concerning the reason why a change of posture should so affect the frequency of the pulse." "The two postures (Dr. Guy observes) between which there is the most marked difference in the frequency of the pulse, viz. the erect and sitting postures, are precisely those in which there is no difference in the position of the heart or its valves, and very little difference in the resistance offered to the circulation; while the sitting and recumbent postures, between which there is so slight a difference in the number of the pulse, are accompanied by a marked change in the position of the heart and its valves, and of the column of blood to be propelled. On the other hand, the difference in the amount of muscular contraction required to support the body in the erect and sitting postures is much more considerable than that required to support the body in the sitting and recumbent positions—differences in strict conformity with the observed frequencies of the pulse in the several postures."

It appears to me, that writers, in seeking to explain the influence of position upon the pulse, have erred in endeavouring to refer it exclusively to a single cause: it probably lies as much in the lungs as in

the heart; the latter organ being indirectly excited in consequence of the increased frequency of the respiration. For instance, the chest expands less, and less air is taken in in inspiration, in the recumbent than in the erect or sitting postures; there is less of the feeling, likewise, which inclines to frequent renewal of the air in the former than in the latter position. In certain diseased states this becomes sufficiently obvious: whenever dyspnoea is urgent, no matter what may be its cause, the patient is unable to remain in the recumbent posture, and seeks to obtain ease by sitting up. As there is less necessity for the blood to circulate quickly through the lungs in the recumbent than in the erect or sitting posture, the respirations are less frequent, and the general circulation is likewise less rapid.

At the same time, there can be no doubt that the venous blood is returned from the head and upper extremities to the right side of the heart more quickly and more freely in the erect and sitting than in the recumbent posture, being remarkably favoured by gravity in the former positions: the pulmonary circulation and the respirations necessarily, therefore, increase in frequency: the left side of the heart then feels its influence, the blood being conveyed more rapidly to it, and the general circulation becomes quickened in the same ratio. Hence there is no difficulty in understanding why the pulse should be more rapid in the one position than the other. Its increased rapidity in the erect over the sitting posture is probably favoured by muscular contraction, as stated by Dr. Guy.

Ratio of the pulsations of the heart to the respirations.—Under ordinary circumstances the proportion which the respirations bear to the pulsations of the heart is about as one to four; this was the ratio established by M.M. Prevost and Dumas: the average number of respirations in a minute, in a healthy adult, being between sixteen and twenty, and the number of pulsations of the heart between sixty-four and eighty. When the heart's action is accelerated by motion or by exercise, the respirations are accelerated in the same ratio; and when its action becomes slow again, the respirations becomes also less frequent.

Mr. Hutchinson* has given a table of the number of respirations in a minute in 1714 healthy adult males, when in the sitting posture: from which it appears that the majority make between sixteen and twenty-four respirations in a minute: of these, a large number make twenty; and in the greater number there were four beats of the heart for one inspiration.

* Med.-Chir. Trans., vol. xxix.

The following table, given by Dr. Guy, shows the average proportions of the pulse to the respiration in 238 experiments; the pulse varying from 44 to 85 beats, and the respirations from 15½ to 20½: the majority of the experiments were made in the sitting posture:—

No. of Observations.	Pulse.	Proportion.
8 . . .	45-50 . . .	2·75 to 1
37 . . .	50-55 . . .	3·05 to 1
50 . . .	55-60 . . .	3·31 to 1
50 . . .	60-65 . . .	3·52 to 1
50 . . .	65-70 . . .	3·59 to 1
27 . . .	70-75 . . .	3·82 to 1
12 . . .	75-80 . . .	4·18 to 1
4 . . .	80-85 . . .	4·31 to 1

The following table* gives the average result of some experiments made on himself by Dr. Harden, in order to determine the ratio of the pulse to the respiration in different postures:—

	Standing.	Sitting.	Lying.
Pulse	80 . . .	70 . . .	66
Respirations .	16 . . .	14 . . .	12

According to M. Parrot,† the frequency of the heart's action increases in a corresponding ratio with the elevation above the level of the sea. Thus—

When the pulse at the level of the sea was 70	
at 3282 feet above its level it rose to 75	
at 4875 " " "	82
at 6500 " " "	85
at 8125 " " "	95
at 9740 " " "	100
at 13000 " " "	110

The cause of the heart's action increasing in frequency according to the elevation above the level of the sea, appears to lie in the lungs rather than in the heart. We know that as the air becomes more rarified the respirations become more frequent: the heart, therefore, is only indirectly excited in consequence of the increased frequency of the respiration, and the ratio between the number of respirations and the number of pulsations of the heart is, probably, the same at each level.

Several pathological conditions have great influence upon the frequency of the pulsations of the heart: in but a few it becomes slower,—in the large majority of diseases it becomes more rapid than natural; while in certain morbid states the ratio between the number of the respirations and the number of pulsations of the heart becomes altered. These are matters, however, for subsequent consideration.

Rapidity of the passage of the blood through the system.—The rapidity with

which the blood passes through the system can be estimated if the amount which is transmitted into the aorta at each systole of the left ventricle is known, and if the entire quantity of blood contained in the vessels is determined—the number of pulsations of the heart being given. Thus it has been estimated that the whole amount of blood contained in the vessels is about twenty-eight pounds; and that an ounce and a half is expelled at each systole of the left ventricle. If, then, the heart of the adult beats seventy-five times in a minute, 112½ ounces, or a little more than seven pounds of blood, would pass through the ventricle in a minute: in four minutes the entire twenty-eight pounds would pass through the heart; and in every hour it would pass through it fifteen times.

Force with which blood is propelled by the left ventricle.—The force with which blood is expelled by the left ventricle has been variously stated by physiologists. Hales made many experiments, with the object of determining this point: he estimated the force with which the blood is propelled into the aorta at four pounds six ounces: "seven feet and a half being the height to which he supposed the blood would rise in a tube connected with the large arteries." M. Poiseuille invented an instrument for measuring the momentum of the current of blood in the large arteries, to which he gave the name of *hemodynamometer*, from which he estimated the force with which the blood is propelled into the aorta at four pounds three ounces; "a result which agrees remarkably with that obtained by Hales."

In employing compression for the cure of external aneurism, I have found that the weight which was sufficient to diminish materially, or to check the current in a large artery, differed considerably in different subjects: in some instances a pressure equal to four pounds upon the femoral artery in the groin was sufficient to check the pulsation of a popliteal or femoral aneurism: in the majority of cases a pressure equal to six or eight pounds was necessary to effect the same object; while sometimes a weight of ten pounds was requisite.

OBITUARY.

On Wednesday, the 20th inst., at his residence in East Street, Brighton, Robert Dix, Esq., surgeon, in his 77th year.

At Kaira, on the 6th ult., universally respected and deeply regretted, T. A. Boyrenson, Esq., M.D.

* Amer. Jour. of Med. Sciences, vol. v. 1843.

† Müller's Physiology, vol. i.

Original Communications.

ACCOUNT OF THE
HISTORY AND DISSECTION OF A CASE OF
MALFORMATION OF THE URINARY
BLADDER,

WITH REMARKS.

By A. MELVILLE M'WHINNIE, F.R.C.S. &c.

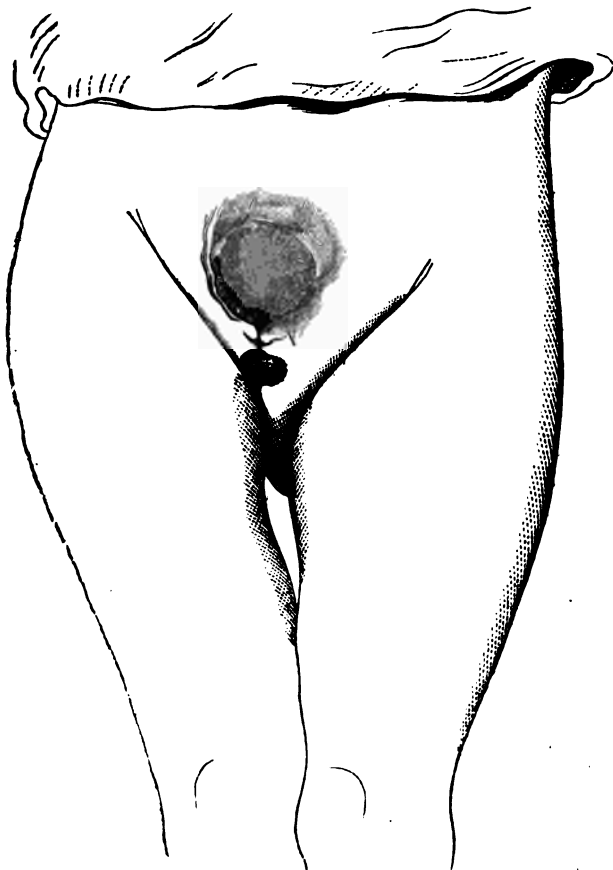
Of all instances in which an arrest of development of parts has taken place during human foetal life, none surpasses in interest or importance that which affects the genito-urinary organs; for, inasmuch as the malformation is in great measure confined to the bladder and urethra, the sufferer from such structural defect may attain mature age—in the great majority of instances sexually incapacitated—a burden to himself, and repulsive to those around.

In my case-book I find notes of two instances, in particular, of the devia-

tion from the natural condition of the urinary bladder, to which the names of *Ecopia*, *Ectrophia*, *Prolapsus*, *Inversio* and *Extroversio Vesicae*, have been given, and which, from their having been for many years under observation, may perhaps be deemed the more deserving of being placed on record: they were both in St. Bartholomew's Hospital, under the care of my friend, the late Mr. Earle, and were, as far as I am informed, not only the first that occurred in that institution, in which any attempt was made to ameliorate permanently their condition, but also those in which some of the earliest experiments were performed to determine the period required for substances introduced into the stomach to be detected in the urine.

Of these cases, the first is that of a girl who, when brought under our notice, was about 13 years of age, and attended as an out-door patient. The annexed Fig. 1 is from a drawing made at the time.

FIG. 1.



Two years afterwards she was admitted into the hospital, "with the view," says Mr. Earle, "of ascertaining if, by the aid of any mechanical contrivance, I could afford her relief from the peculiar inconvenience which she suffered, on account of a congenital malformation of the bladder. After some trials, I was able to provide an instrument by the use of which the patient was placed in a comparatively comfortable condition."

To this case, interesting on account of its comparatively rare occurrence in the female, it is necessary here only to allude: the circumstantial details are minutely and faithfully recorded by Mr. Earle, in a Clinical Lecture, published in Vol. I. of the London Medical and Surgical Journal, and a model of it in wax is preserved in the museum of the hospital.

The drawing exhibits the appearance of the deformity: the protruded mucous surface of the bladder resembled a piece of crimson velvet. The clitoris is bifid, and the anterior commissure of the labia deficient.

In this, as in other analogous instances, there was no distinct umbilicus: the umbilical vessels, it was inferred, must have passed through the hypogastric region immediately above the bladder, as demonstrated by recorded accounts of dissections.

It was here that Mr. Earle endeavoured, by the repeated application of escharotics, to destroy some of the exposed mucous surface, with the view of obtaining cicatrization, and thus diminishing its sensibility: in this he was unsuccessful.

Amongst other interesting and important results of experiment, it was found that asparagus affected the odour of the urine in eight and a half minutes; urpentine in four and a half minutes.

At the time of her leaving the hospital she exhibited the usual signs of puberty; menstruation was regular. Frequent opportunities were afforded us afterwards of seeing her, and of being witness to the comfort and assistance rendered by the use of the apparatus adapted to collect the urine, and protect the sensitive and vascular surface of the tumor.

Nor is it necessary here to enter into a detail of the appearances which these cases ordinarily exhibit: either sex during life.

tures are familiar to perhaps most members of the profession, and are described by many pathological writers both at home and abroad.

Dr. Duncan, in his systematic account of these malformations, contained in Vol. I. of the Edinburgh Medical and Surgical Journal, has contributed many particulars respecting them, together with copious references to authorities. Dr. Baillie has given perhaps the most full and accurate account of a dissection, in Vol. I. of the Transactions of a Society for the Improvement of Medical and Surgical Knowledge, with good illustrative plates. Since that time numerous observations have been made and reported: the chief points of difference, however, appertaining not to the condition of the bladder and pelvis, but to that of the external organs of generation, which in both sexes present many varieties in their conformation, and which it is not my object here to enumerate.*

The subject of the second case, which I would more particularly describe, was a boy about 7 years of age when he first applied for relief, and was an object of much interest, affording almost at the same time an example of the monstrosity in the other sex, and an opportunity of repeating and extending the foregoing experiments upon the urine.†

In the MEDICAL GAZETTE for 1845, are some of the particulars of a case of this description, published by Mr. Erichsen, accompanied with some important observations "on the rapidity

* Amongst the continental writers who have most fully investigated the subject, and who furnish a list of references to other treatises and recorded cases, the following may be more particularly cited.—

Breschet, art. "Extrorsion," in Dictionnaire des Sciences Médicales.

Peter Schmitt, Ueber die Harnblasenspülte nebst Beschreibung, und Abbildung einiger beim Männlichen und Weiblichen Geschlechtsfalle. Würzburg.

Isidore Geor. St. Hilaire, Histoire générale et particulière d'anomalies de l'organisation chez l'homme et les animaux. 3 vols. avec Atlas. Paris 1825.

W. Vrolik, sur quelques sujets intéressants d'Anatomie et Physiologie. Amsterdam 1832. And in the Cyc. of Anatomy and Physiology, art. Teratology. Besides these, there are many more or less comprehensive essays.

† Some account of it, at this early period, will be found in an abstract of a clinical lecture, by Mr. Earle, in vol. x. of the MEDICAL GAZETTE, and to which reference is made by Mr. Daniell, of Newport Pagnell, in his paper, which contains some excellent observations, published in vol. ix. of the Provincial Med. and Surg. Journal, p. 461.

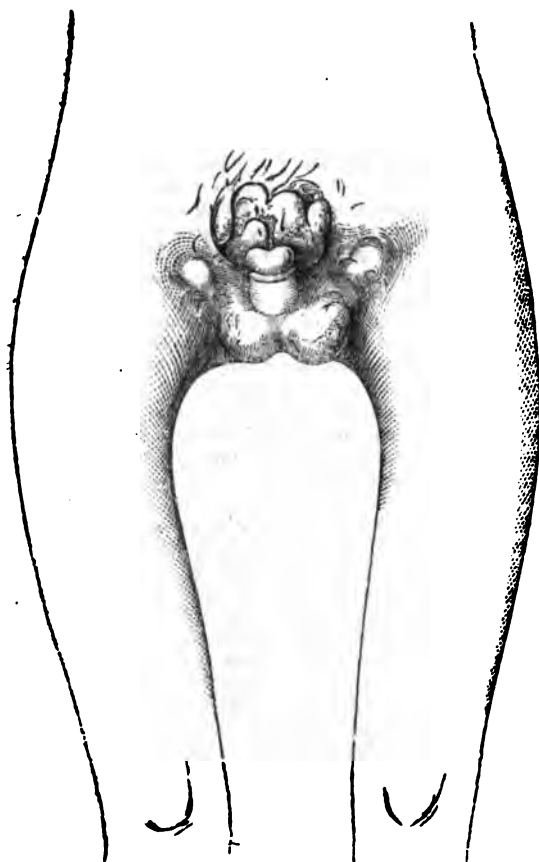
f the passage of some foreign substance through the kidneys, and on some points connected with the excretion of the urine." The satisfactory result of these observations, there recorded, is well known, and renders unnecessary the further recital of those which were made in the present cases.*

At the lower part of the abdomen was the same soft, pulpy, florid and vascular swelling, as is represented in the drawing of the case of the female, formed by the protruded mucous surface of the posterior wall of the bladder, its protrusion varying with the degree of pressure from behind, and affected both by the respiratory movement of the surrounding

parts, and by the posture of the body. The penis was rudimentary, with complete epispadias; the urine, constantly distilled from the open mouths of the ureters at the lower part of the swelling, fell, during the erect posture, in part, upon the open groove of the urethra, which served imperfectly as a spout.

In each groin was a projection which became more marked as the growth of the body advanced, corresponding with the widely separated pubic bones: from the want of symphysis and consequent support in the front of the pelvis, resulted considerable weakness in the part, and awkwardness in the movements:

FIG. 2.



* See M. Tenon's account of three cases, with illustrative plates; to which are added, Experiences et observations physiologiques faites dans

le but de jeter quelque jour sur les phénomènes de la sécrétion et de l'excrétion urinaire, in Mémoires de l'Acad. des Sc. 1763, p. 115.

these inconveniences, as well as the general deformity, were further increased by the distance to which the thighs were thrown apart from each other.

Being furnished with the instrument adapted to his case, he left the hospital and returned to his home at Balham, where he became a patient of Mr. Bainbridge; he died of phthisis, having passed the age of 21: through the kindness of that gentleman I had an opportunity of assisting at the post-mortem examination.*

The body, rather short in stature, was much emaciated from the tubercular disease of the lungs; otherwise, nothing particularly striking was observed in its outline, excepting in the extent to which the thighs were separated from each other, as represented in the sketch (fig. 2, preceding page).

In the groin, on each side of the malformed genito-urinary organs, is seen the prominence corresponding with the body of the pubes. The general aspect of the body, as well as the signs manifested during life, showed that the period of puberty had not been retarded.

Here, again, there was no appearance of umbilical cicatrix; the recti abdominis, in the upper two-thirds of their extent, were about an inch apart; below, a triangular space was left by the divergence of each muscle to the corresponding pubic bone, which was separated from its fellow to the distance of about two inches and a half.

Through this fissure the irregular nodulated mucous surface of the posterior wall of the bladder protruded; its muscular fasciculi had acquired considerable strength. The mouths of the ureters, directed towards each other, were surrounded by prominent papillæ.

On looking into the pelvis, the vacuity there was very striking: the space between the anterior wall of the abdomen and the rectum, ordinarily filled by the bladder, being here entirely unoccupied.

At the upper margin of the vesical tumor, the obliterated umbilical arteries converged to come into contact with the remains of the umbilical vein, which

took a longer course than usual to reach the liver. No trace of urachus could be discovered.

The pubic bones (see fig. 3, next page), often connected by strong ligaments in cases where they are disjoined, and in some measure counterbalancing the want of osseous union, had merely a few thin fibrous bands passing between them, quite inadequate to give fixity to the parts or support to the viscera.

The rudimentary penis measured about one and a half inch in length; the glans, cleft at the upper part, had appended to it below an imperfect preputial covering. The epispadias was complete; the urethra presenting a simple open groove or furrow, upon the surface of which several lacunæ opened. The prostate, deficient above, was of tolerable size beneath the canal. Into this part of the urethra (which, in the same figure, is represented drawn down with a hook), the seminal ducts terminated, as usual, on each side of the verumontanum. Their orifices are marked by bristles: the upper ones are placed in the ureters.

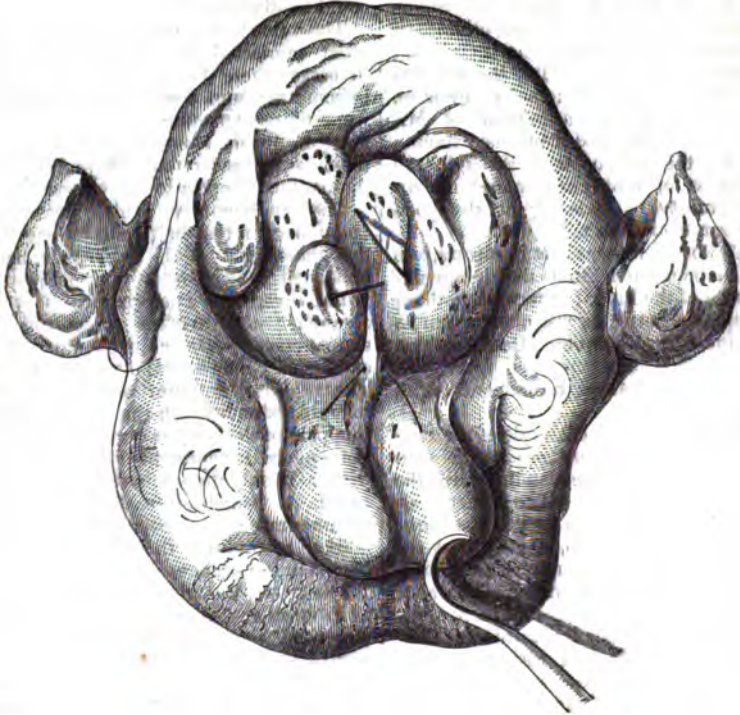
The testes, though diminutive, were, as in most analogous cases, natural in structure: they had descended into a small contracted scrotum.

On removing the parts, which are now preserved in the museum of St. Bartholomew's Hospital, the vasa deferentia were found to have their proper relation to the vesiculæ seminales, which were below the natural size. The ureters, sometimes so enormously dilated as if designed almost to compensate for the want of the proper reservoir, and of which a remarkable instance is described and figured by Sir Astley Cooper, in vol. i. of the Edinburgh Medical and Surgical Journal, were quite natural. Each corpus cavernosum diverged from its fellow; and, taking a more transverse direction than usual, was connected by its crus with the corresponding ischium, where it was covered by a few faint fibres of an erector muscle. Some slender elongated fibres occupied the situation of the transversus perinei. As in many other instances, the anus was situate immediately behind the scrotum.

A remarkable and well-known feature is the want of union of the pubic bones by synchondrosis, there being an interval between them corresponding more or less in breadth with the abdominal

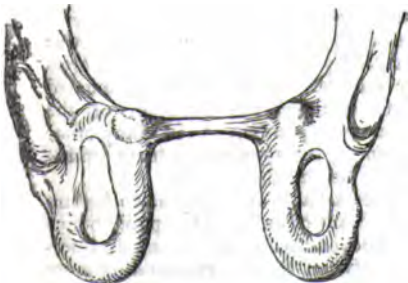
* The best preserved specimen that I am acquainted with is in the Hunterian Museum, presented by Mr. Beale. Monsters and malformed parts, No. 136, in Sub-series 5, from a full-grown male foetus, and resembles very closely the present case. The parts were dissected by Professor Owen. The exposed mucous surface is beautifully displayed by injection.

FIG. 3.



fiſſure. The ſame condition of theſe bones has been obſerved in animals co-exiſting with an imperfect ſtate of the bladder. In the anatomical muſeum of the University of Berlin is the pelvis of a man, aged 30; in which the pubic bones are ſeparated from each other to the extent of twenty French lines, and connected by a ſtrong roundiſh ligament, paſſing acroſs from one ſpine to the other, as represented in fig. 4.

FIG. 4.



Concerning the individual from whom

the preparation was taken I did not obtain any very precise or ſatisfactory information; but he was ſuppoſed to have ſuffered from one or other of theſe defects in the ſoft parts.

Dr. Baillie, in his work on Morbid Anatomy, obſerves:—"When there is ſuch a formation of the bladder, I believe there is always a deficiency in the pelvis, of the bone of the ſymphysis pubis, and alſo a monſtrous formation of ſome of the organs of generation." And Dr. Duncan remarks:—"Although this aberration from the natural ſtructure of the pelvis is not mentioned by ſome authors, I am inclined to think it actually exiſted. Mr. Coates' caſe appears ſingular; but, as the ſeparation may exiſt in various degrees, and as the examination here was only external, even, this cannot be confidently ſtated as an exception." Meckel,* I think,

* Manuel d'Anatomie Generale, Descriptive et Pathologique, par J. F. Meckel, tranſlated by Jourdan and Brechet, tom. iii. p. 58. Since the above was written I have been informed by Mr. Hodgson that he has met with an inſtance in which the pubic ſymphysis was perfect.

includes this well-known instance when he says:—"Si l'on excepte au plus deux cas publiés jusqu'à ce jour, la symphise est toujours plus ou moins imparfaitement fermée."

That this absence of symphysis, and separation of the bones to a great extent, may, on the other hand, be independent of any abnormal condition of the bladder, or even fissure in the integuments over that viscus, is proved by a specimen which was obligingly shown me by Mr. Mayo, of Winchester, and afterwards published by him in vol. ix. of the Provincial Medical and Surgical Journal. The subject was a woman, aged 29, who suffered from urinary calculus, and died from disease of the kidneys.

Here the bladder, which contained a large stone, was perfect, but the external organs of generation were defective. The ossa pubis were separated to the extent of five inches. Between the spines (which were seven inches apart) was stretched a ligamentous band, similar to that in fig. 4, but half an inch in breadth. As Mr. Mayo observes, this state of the pelvis bears a resemblance to that of the female guinea-pig towards the end of pregnancy.*

In the hypogastric region, just above this ligamentous band, (and in the situation occupied by the prolapsed malformed bladder, when it exists), "an oblong pouch presented itself, and which appeared to be the result of the divergence of the recti muscles, whose tendons were inserted into the separated angles of the symphysis, and thus left the anterior part of the abdomen without any other protection than the skin and fascia, and the peritoneum which lined the pouch." The model of the parts before dissection, together with the pelvis itself, are preserved in the Hunterian Museum.

In speculating upon the nature and origin of the various deviations from their natural structure to which these parts are liable, and how far they may severally be considered in their relation

to each other, as cause and effect,† the condition of the pelvis here described, unassociated as it was with any corresponding defect in the bladder, must be regarded with interest, and is directly opposed to some of the hypotheses which have been framed and supported by intelligent writers.

Professor W. Vrolik, in his work, "*Sur quelques Sujets Intéressants d'Anatomie et Physiologie*," gives the details of a case† in which, although the pubic bones were separated, the bladder retained its integrity; but its anterior wall projected through a fissure in the abdominal parietes. In a preceding memoir‡ the author had attempted a classification of these deformities, according to their degree, and observes—"Que l'infirmité dans l'état où je viens de la décrire doit figurer la première dans une classification méthodique des extroversions, comme étant le plus faible degré de l'altération, qui faisant des progrès successifs, finit par constituer cette maladie sous ses différentes formes."

In the example furnished by Mr. Mayo there was a still minor degree of deviation from the natural state of the parts in the hypogastric region; for not only was the bladder entire, but the integuments, fascia, and peritoneum covered the fissure between the abdominal muscles, forming a kind of hernial sac in this situation.§

As regards the frequency in the occurrence of these malformations of the bladder, it is sufficiently great to excite the interest of the profession generally. Nine cases, of which two were female, have fallen under my own observation. Of known and recorded examples, Isidore G. St. Hilaire says that a fourth

* Cette accordance remarquable qu'expliquent parfaitement les organes sexuels avec les pubes, est une première preuve de la constance du rapport général que je démontrerai plus tard exister entre les vices de conformation des parties molles et l'état de développement du système osseux."—Isidore G. St. Hilaire, loc. cit.

† Sur un vice de conformation accompagnée de la déviation de la moitié antérieure de la vessie et de la division partielle du pénis." Also figured by the Professor in the Cyc. of Anat. and Phys. art. Teratology, fig. 605.

‡ In the same volume—"Mémoire sur une extroversion accompagnée d'une portion retournée de l'intestin grêle qui a perforé la paroi postérieure de la vessie."

§ The pelvis represented in fig. 4 is possibly the specimen described by Walter, in his work, *Von der Spaltung der Schaambeine*, Berlin, 1782, and referred to by Vrolik and Meckel; and would, if it be the identical one, afford another proof that the symphysis may be defective without the existence of extroversion vesicæ.

* In birds destitute throughout the class of a urinary bladder, the open condition of the pelvis is almost universal. The pubic bones in the two-toed stoth are permanently separated, and connected by a strong ligament, the bladder being perfect. In the mole, whose pelvis will scarcely admit a small probe, the ossa pubis unite to enclose the caudal vessels only, forming a simple hemial arch.

only were females. Mr. Earle, at the date of the clinical lecture alluded to, found, on searching the records of instances of this congenital defect, that eight had been observed in the female, and sixty in the male. Subsequent to that period a large number have been added to the list of published cases; and at this time I am acquainted with several in and about the metropolis.

Besides the urinous smell which aggravates so much their wretched condition, there is frequently that peculiarity in the movements of the individual, most striking in early life, by which the nature of the infirmity may be detected, resulting from the soreness of the parts, and the consciousness that the tumor will bleed from the slightest friction, as well as from the imperfect structure of the pelvis, and the distance to which the acetabula and lower limbs are thrown asunder. Mr. Earle alludes to this feature in the early stage of the girl's case, when she had a "rolling, waddling, insecure gait, and which is less remarkable now."

Mr. Giles, of Stourbridge, describes the effects produced in his patient by the constant efforts to protect the parts in walking, "the inferior extremities having become bent outwards at the knee, making his gait extremely awkward."

The chafing and excoriation I have observed to be greater in the female, whose skin is more delicate and susceptible, and the urine reaches the thighs and parts between them more readily than in the male. In the latter, too, the more or less open mucous surface of the imperfect urethra, upon which the urine is in part constantly dribbling, may, during the erect posture, serve occasionally, in some degree, to conduct it away.

Mr. Startin has obligingly informed me of the advantage to be derived from varnishing the surrounding parts with the collodion, rendered elastic by the addition to it of some fatty oil, thus preventing excoriation.*

In regard to the generative functions, it may be noticed that there is, for the most part, entire abrogation of all procreative power in the male, although, in connection with the integrity of the internal organs, the ordinary sexual an-

petite may exist,—the necessary consequence of the condition of the urethra. In this respect that sex has been pronounced less fortunate than the female, the varied imperfections of whose external organs offer no material impediment to conception, and even safe delivery in some instances.

In vol. xxxii. of the Philosophical Transactions is a letter from Oliver to Dr. Mead, describing this congenital defect in a female: he says:—"Hunc in modum conformata, valetudine satis bonâ fruebatur virgo, et æternâ virginitate ex necessitate laboraturam concluderant omnes quibus res innotuerat. Advenit tandem nauta quidem, cui res triplex circa pectus erat: illam vidit, amavit, duxit, et non multò post impregnavit."

In both these cases the apparatus had fulfilled its object. The young man died just as it was about to be renewed by some charitable persons. It was a modification of the concave shield worn by Matthew Ussem, the German traveller, described and figured by Dr. Duncan in the paper above referred to, and consisted of a silver bowl, covering and protecting the tumor and external organs, supported and maintained in its situation by bandages around the loins. The urine here collected flowed through a funnel at its lower part into an India rubber bottle placed between the widely-separated thighs (fig. 5). The efficiency and comfort are now further increased by fixing the cup with a double truss. The urine passes down a vulcanised India rubber pipe into a metallic reservoir, adjusted to the inner side of the calf of the leg, and which can be evacuated at pleasure by means of a stop-cock.* For the female the bowl will accomplish its purpose more completely by being so constructed that it may enclose the posterior commissure of the labia. (See Vrolik's fig. 604, in Cyc. of Anat. and Phys. loc. cit.)

It is gratifying to find that Mr. Earle's views have been confirmed, experience having shown that the contrivance has afforded the substantial and permanent relief he contemplated. Whatever improvements it may have received since his suggestions, the essential plan of its construction origi-

* The preparation he employed is that of Mr. Thomas Taylor, of Vere Street, "The Collodion Tinctum Præparatum."

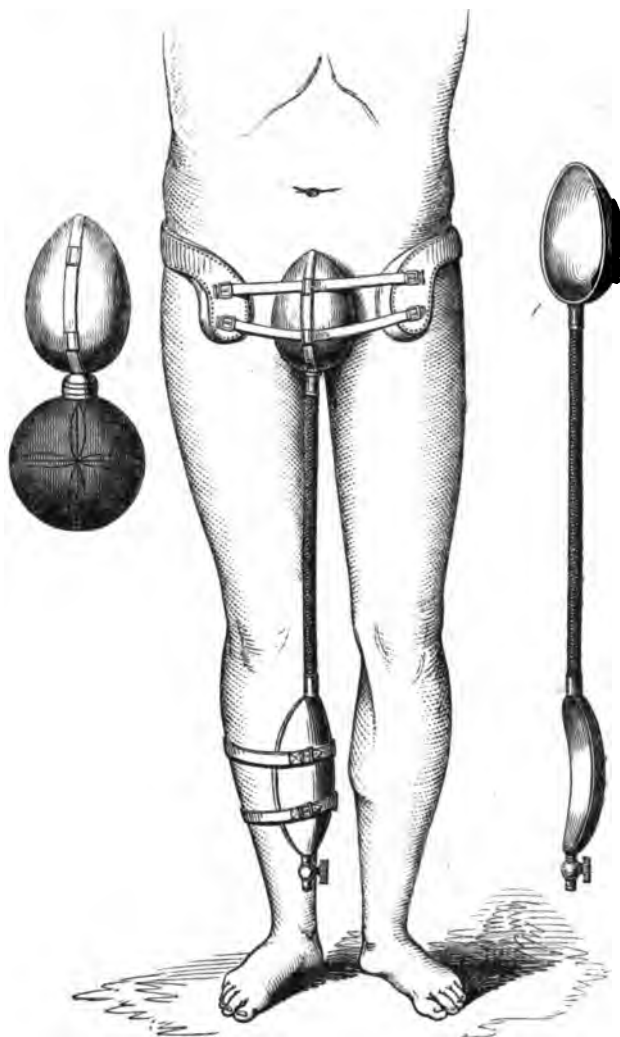
* Fig. 6 represents the apparatus adjusted, as now manufactured by Messrs. Ferguson, Giltspur Street, London.

Fig. 7, side view of the instrument.

FIG. 5.

FIG. 6.

FIG. 7.



nated with him, and it is due to his memory to bear testimony to the value of this, one of the many contributions for the relief of human suffering which

emanated from his active and philanthropic mind.

5, Crescent, New Bridge Street,
Feb. 1850.

EXPULSION OF A FETUS BY THE MOUTH (!)
THE Spanish journals report the case of a woman who, during the second stage of yellow fever, vomited, with great difficulty, a substance which proved to be the body of a fetus of four months, perfectly developed: this was followed after a few minutes

by the placenta. The patient died the next day. The autopsy discovered the uterus much increased in size, and between the vagina and uterus an abnormal cavity communicating with the intestine by an opening four inches in diameter. — *L'Union Médicale*.
X

THE
CHOLERA IN PLYMOUTH.

By WILLIAM F. SOLTAU, M.B.

à Coll. Bell. Oxon.

[Continued from page 56].

HAVING in a previous paper given a brief sketch of the history of the cholera as it prevailed in this town during the months of July, August, and September last, I shall now proceed to consider some of the phenomena which were developed in its symptoms, and gave it the character of a specific disease.

It seems to be an axiom connected with the history of epidemics, that whenever they prevail they have a tendency to stamp every other disease with their peculiar type, especially such as are from their nature allied to them. Thus, for instance, when scarlatina is raging in any locality, sore throats will be found to be very abundant; when influenza visits a district, the ordinary catarrh quickly passes into bronchitis; when typhus prevails to any extent, fever that is symptomatic of internal disease assumes the type: the ordinary symptoms of disease are thereby altered, and assume a distinct character. The truth of this position was fully enunciated in the history of the cholera during its recent visitation. Hence it was that common attacks of diarrhoea, which, under ordinary circumstances, soon yield to simple remedies, were found to be peculiarly obstinate, and resisted the usual treatment to which they are subjected. This was particularly seen in children and old people. In all these cases there seemed to be some common though secret cause which produced its peculiar effects on the economy, and gave thereby an aspect to the disease different from that which it was accustomed to assume. Hence we heard much of choleric diarrhoea, which meant a species of diarrhoea unseen excepting in connection with the prevalence of cholera. This will, therefore, lead us to say a few words first on the ordinary cases of diarrhoea, and the peculiarities which they developed; secondly, on the extraordinary cases of choleric diarrhoea, as they were called, which were so very abundant during the whole time that

the epidemic was amongst us; and thirdly, on the "signs" of the cholera itself.

First, then, we had cases of *ordinary diarrhoea* to deal with. These were characterised by a simple evacuation of liquid stools, consisting of feculent matter, and a plentiful secretion of bile. The affection seemed to be entirely local, as it was very rarely attended by any constitutional symptoms. The appetite was but little affected; there was nothing particular in the appearance of the tongue; the pulse was quiet; the abdomen free from pain, excepting an occasional griping preceding the calls to stool. An attack of this sort would have been little heeded under ordinary circumstances, and it would not have come under the notice of the medical practitioner but for the presence of that frightful disease with which its symptoms were distantly connected. What marked these simple cases of diarrhoea was the pertinacity with which they resisted the remedies prescribed, and the frequent return of the symptoms after they had appeared to have yielded to treatment. These relapses occurred without any assignable cause, as though something unseen was keeping up the internal irritation. As far as my own experience was concerned, astringents were of little avail in the early stages of this form of diarrhoea, the remedy most serviceable being equal parts of hydr. cum creta and Dover's powder.

The second form of diarrhoea to which our attention was drawn was still more marked in the peculiarity of its features, and bore a nearer resemblance to those of the epidemic; it hence, therefore, obtained the name of *choleric* or *choleraic diarrhoea*, the distinctive character of which we shall now consider. A person would be seized with a sensation of nausea, and "load" at the scrobiculus cordis, and this would be followed by a sudden call to stool. The evacuation would be *very copious*, and *liquid*; containing, however, feculent matter, but apparently without any bile. This was indicated by the peculiar colour of the discharge, which was like *muddy water*, and *frothy*. If, therefore, bile was mixed with it, it must have been of an altered character. The sickness in these cases was not of a severe nature, and soon checked. The urine was not very free; the pulse was firm; the skin warm; the tongue

coated with a brownish fur; and headache was often complained of. It was seldom that cramps occurred, though the diarrhoea was very severe. I find only four cases in my list where the symptom was present in choleric diarrhoea. From the above account it is evident that this disease was much more formidable in its nature, and more allied to cholera, than simple diarrhoea, and I believe it to have been cases of this kind that when neglected, or carelessly treated, soon passed into cholera. The peculiarity of the evacuations is what stamped this form of diarrhoea with an especial mark, making it in this respect unlike anything else I had ever before seen. Diarrhoea, it is true, varies much in the character of its discharges, which are dependent upon the condition of the viscera with which they are connected for their normal or abnormal appearances. As, therefore, the secretions of the pancreas, the liver, the intestinal mucous membrane, and its numerous glands, may become disordered, so may we expect a variety of appearances in the evacuations resulting therefrom. The character, however, of the evacuations in choleric diarrhoea was something *sui generis*, which must have called the attention even of the most experienced to the fact that he had to deal with something new. The copiousness of the discharge, its dirty muddy colour, indicating either an absence or alteration of the biliary secretion, its watery nature, and frothy appearance, were features too striking to permit them to be declared as identical with those of any other disease with which we are familiar. Hence it was that some put down all cases in which the above symptoms were prominent as those of cholera in a mild form; and frequent has been the discussion as to where choleric diarrhoea ceases and genuine cholera begins. The line, however, between the two seems to be well marked, and the distinction to be easily drawn. We shall, therefore, now proceed to consider the especial characters whereby cholera was to be distinguished from its relative, choleric diarrhoea.

If a doubt existed whether bile was or was not present in the evacuations of choleric diarrhoea, it was removed beyond all contradiction in every case of cholera. The discharge had not the slightest vestige of this secretion.

In choleric diarrhoea we find feculent matter often in abundance; in cholera no trace of feces could be discovered. In the former disease the cramps were rarely present, and then of a very mild character; in the latter they were rarely absent, and from their severity most distressing to the patient. The sickness, too, of choleric diarrhoea was easily checked, and presented nothing peculiar to the eye of the observer. That of cholera, on the other hand, was characteristic almost of the disease. The force with which the stomach ejected its contents was remarkable, so great as at times to send them with a jet into the middle of the room. The vomiting resembled that resulting from acrid poisons, and continued the same throughout. The serous character of the discharges, the suppression of urine, the severity of the cramps, and the urgent sickness, were the diagnostic marks of the first stage of cholera. The presence of the first mentioned symptom was, in itself, sufficient to declare the real nature of the disease. Much has been said, and much written, on the appearance of the peculiar evacuation. Some liken it to water in which rice has been boiled,—hence the name of rice-water vomiting and purging; others consider it to resemble soapy water, or whey. It was sometimes quite clear, containing a sediment somewhat like boiled vermicelli; at other times it was of a slight milky tinge, without, however, the least trace of bile or feculent matter. In the first stage of cholera there was an anxious and depressed look, the tongue was a little furred, and of a flabby sodden appearance; the skin was warm, and the pulse weak, from 110 to 120. There was a slight huskiness of voice, and heat and pain complained of in the epigastrium and left hypochondrium. The insatiable thirst was the most trying symptom. This was the tractable stage of the disease, and if the constitution was good, and the system had not been weakened by previous diarrhoea, soon yielded to the influence of remedies. Where, however, the patient was of a debilitated habit, no matter how produced, and the vital energies had been previously weakened, the first stage of cholera passed into the second, or that of collapse. In some cases of this description, from the very first the patient was collapsed. In what way, then, was the second stage of the disease dis-

tinguishable from the first? The countenance was pinched in its every feature. The eyes were sunk in their sockets, and surrounded by a dark margin. The skin was drawn tight over the nose. The mouth was partially open, the tongue cold, and also the respired air. The countenance was so completely altered as to turn the features of childhood into those of old age. A person of twenty might have been taken for one of fifty or sixty. The skin was icy cold; the pulse scarcely perceptible at the wrist. The coldness of collapse was something very peculiar. It exceeded that of death, and left an abiding impression of its sensation in the organs of touch, which time alone removed. There was often a moisture on the surface which added to the peculiar feeling. The patient made but little complaint of his distressing condition. The powers of life were so depressed, and vitality so much lessened, that the organs of sense had lost their ordinary power. The patient in fact was either past feeling, or too weak to make it known. His restlessness, however, was incessant. It was scarcely possible to keep him covered. The arms were tossed about in all directions, and were never allowed to remain beneath the bed-clothes. If spoken to he would either reply in a whisper, or in a tone of voice of feeble hoarseness. The "vox cholericæ" would announce the stage of the disease sometimes before any other symptom was inquired into. If there was any thing complained of at this juncture, it was pain in the head, and noises in the ears; great uneasiness also was referred to in the left hypochondrium. Though the diarrhoea continued, the sickness often ceased. Drink was all that was asked for. The time in which the patient would remain in this condition varied in almost every case. It was impossible to say with certainty when the scene would close. The poor always dated a change for the better or the worse as taking place at the end of the twenty-four hours which succeeded the first symptom of the attack. It often happened that for many hours previous to actual dissolution, the patient would lie almost motionless and apparently insensible, and this gave rise to the belief that he had been opiated. The cornea would lose its moisture and shrink, and the eye resembled that of a boiled fish. I have known a person to remain in this dis-

treasing condition for eight or ten hours. They could in this state be persuaded to take in what was offered them, even to the very last.

If a patient was to come out of collapse, the first indication we had of it was in the return of the pulse to the wrist, and with this a slight increase of temperature in the skin. The latter, however, without the former, was a delusive symptom, for it occasionally happened (from what cause I do not pretend to say) that in the last stage of collapse heat would be suddenly evolved from the body, and yet the patient would rapidly sink. My attention was particularly directed to this fact, in the case of a child aged nine years, to whom I was called when already collapsed. I saw her three times within six hours, and at neither time had she any pulse perceptible at the wrist. At my third visit, however, I found that the warmth of the body had returned, and I fully expected to have found reaction indicated by the state of the pulse; but as I before said, there was no trace of it to be discovered. The friends considered the child was better, but I told them that though at first I had thought so, yet from the absence of the pulse I could not pronounce that any satisfactory improvement had taken place. This happened at about 7 p.m. At 9 p.m. I returned to the house with a medical friend who had never seen a case of cholera, and requested me to show him one. I accordingly took him to see the above-mentioned case, but on our entering the house I found the child had died an hour after my previous visit. A return of warmth without pulse is not, then, enough to indicate that reaction has commenced. When, however, the two are found together, the case has assumed a more favourable aspect. When we say favourable, we mean comparatively speaking, for the first symptoms of reaction are but the precursors of a series which make up what is called the secondary or consecutive form of cholera, or choleraic fever. Before we proceed to the consideration of this fever, we must advert to one or two phenomena connected with the primary disease to which we have not yet referred. It did occasionally happen that one discharge from the bowels was enough to throw the patient into collapse from which he never rallied. We will take a case. A female, aged 30, of delicate constitution,

was apparently in perfect health at one o'clock P.M. She eat her dinner, consisting of a mutton-chop, with her usual appetite. All was as usual with her until three P.M., when she complained of not feeling very well. She was missed for a few minutes by her friends, who on searching for her found her at the water-closet. She was collapsed. There was one copious evacuation in the receptacle. She was unable to move, all her strength was gone. She laid on a sofa, and rapidly sunk, the attack carrying her off in twelve hours. In this case one discharge purged her to death. She had no previous diarrhoea, no premonitory symptoms. Her father had died two days before of cholera, in the same house. A medical friend of mine in our town mentioned to me one or two cases of a similar character which came under his notice. He had remarked in one of his morning visits a very fine child that was playing outside the door of the house he had entered. He was sent for some two or three hours afterwards to the same house, and there he found this object of his admiration collapsed, beyond the hope of recovery. The history was the same as that above given. The child had been apparently in perfect health up to within a few minutes of its sudden attack. One copious evacuation had left it collapsed. Had a sudden gush of blood issued from a ruptured artery it could not more suddenly have prostrated all vital power. There were cases reported to have occurred where the patient was seized with every symptom of collapse, and died rapidly, without any vomiting, purging, or cramps. A physician of this town told me he had seen the disease in this form when it raged here in 1832. It did not fall to my lot to witness any such cases during the recent visitation. As yet nothing has been said of one of the very remarkable symptoms of cholera—namely, the blueness which rapidly comes over the extremities in collapse. It is difficult to describe this peculiar colour. It is like the hue which is seen in the skin of those who have taken large quantities of the nitrate of silver, or that somewhat ghastly tint, which is so disfiguring in the photographic portraits. It is evidently dependent upon the altered condition of the colouring matter in the blood corpuscles, together with the congested condition of the capillaries, owing to the enfeebled action of the heart.

The patient in the collapse of cholera is for hours dying. The heart is the ultimum moriens. The blood, however altered in its quality, is sufficient to stimulate it to action; and whilst this continues life remains. The patient seems to suffer but little, and at the last remains motionless, and takes no notice excepting when offered the prescribed remedies. Most of the persons in this state would be found lying on either side, but not on the back.

We shall now proceed to offer a few remarks on the secondary fever of cholera. This would be first indicated by the ordinary symptoms of reaction. The pulse could be felt at the wrist; the extremities lose their icy coldness; the bluish tint be gradually dissipated, and the countenance assume a more natural appearance. To the inexperienced such a change promised the most favourable results; but a more intimate acquaintance with the history of these phenomena showed how little they could be relied upon as the prognosticators of good. As reaction went on, the face became suffused, the eyes much injected, and the manner of the patient dull and heavy. The bowels were sometimes opened twice in the twenty-four hours, but the dejections were unhealthy. They were loose, and though occasionally they contained vestiges of biliary secretion, yet the functions of the liver remained greatly impaired. At times the evacuations were bloody, and not unlike high coloured urine. In one or two cases I imagined at first sight, from this peculiar appearance, that urine had passed; but on a more minute inquiry I found that such was not the case. The kidneys all this time remained perfectly passive, and their functions were completely suspended. If no improvement took place in these symptoms within two or three days, the congestion about the head would increase, symptoms of coma would come on, sordes would collect about the teeth, the patient would be constantly muttering and delirious. If asked how he was, he was always better. A distressing hiccup would often harass him, sometimes lasting for six or seven hours. In this condition he would remain three or four days, gradually becoming weaker and weaker, and at length would sink under the symptoms of typhoid fever. Here there was a consecutive disease as fatal as that upon which it was grafted. Of the

severe cases which came under my care two only recovered. The symptom that I regarded in this stage of the disease as most favourable, was the return of the renal secretion. It was not, however, always to be depended on, as I have known the urine to be free two or three days before death, and yet the patient sink. It occasionally happened that the function of the kidney returned for a few hours, and again became suspended. In the last stage of collapse the eye was always turned upwards, so that nothing but the white sclerotic was seen between the half-closed lids. I never saw a patient who rallied when this symptom was present, and whenever I witnessed it I regarded it as a sure sign that the case would terminate fatally. The nauseating smell which emanated from the discharges of cholera patients was characteristic of the disease. It somewhat resembled that of semi-putrid flesh, and often made itself evident to the senses on the first entrance into the patient's room. In choleric fever, one of the most obstinate symptoms with which we had to deal was sickness of a peculiar character, indicated by the colour of the matter vomited. It was of a bright green tint, and consisted of bile altered in its quality, or of that secretion mixed with some morbid product of the stomach. It was most distressing and trying to the patient, and resisted every species of treatment.

Having thus given an outline of the "signs" of cholera, and its attendant choleric diarrhoea, it remains that I should offer a few observations on its treatment and mode of communication; and as far as my own experience will enable me, I hope to take up these points in my next and last paper.

Plymouth, Jan. 30th, 1850.

POISONED GAME.

AT Lavanne, in the neighbourhood of Rheims, entire covies of partridges have been found dead in the fields. Chemical analysis of the undigested contents of their gizzards has led to the detection of considerable quantities of arsenic in the grain on which they had fed. The arsenic had been employed to destroy vermin. The editors of *L'Union Médicale* observe that the occurrence of fatal poisoning in individuals, in England, who had partaken of game thus poisoned, should have induced Governments to have forbidden the employment of arsenic for such purposes. X

ON CERTAIN PHYSIOLOGICAL AND PATHOLOGICAL PHENOMENA

CONNECTED WITH
THE RESPIRATORY PROCESS.

BY J. J. TRAYER.

(Read before the Dublin Obstetrical Society,
March 4th, 1848.)

As this Society has not heretofore confined its labours to subjects purely obstetric, but has extended its field of consideration so as to embrace the varied horizon of incipient life, and weigh each interesting subject that presents itself, in its hearings not merely upon the present safety of the new-born infant, but upon his future prospects—his hopes of health and strength—his liability to disease and decay: as you have never hesitated to lend an attentive ear to any subject of infantile therapeutics and physiology, I have ventured to ask a hearing for a short account of some observations and experiments, on the establishment of respiration in the human subject.

The occasion of my making these inquiries was briefly this:—In a lecture which I heard at the College of Surgeons in 1840, it was stated, in explanation of the alleged fact that tubercular deposit takes place more frequently in the left lung than in the right (and on the authority of I know not what French physiologist), "that the respiratory process is generally fully established in the right lung a considerable time sooner than in the left," which latter was thence supposed to derive some congenital disposition to that disease. It would be out of place here to enter into any lengthened detail of my own opinion on the question sought to be set at rest by what I hope to be able to prove is a mere assumption: suffice it to say, that the notes now lying before me, of such cases of phthisis as I have observed in my own practice, show a very small fractional excess in frequency of commencement of this disease at the left side: nothing at all like what one would naturally expect to flow from a generally existing predisposing cause on that side. In fact, as to whether tubercular phthisis commence more fre-

quently at the right or left side, I would say, "*Adhuc sub judice lis est.*"*

I was a good deal surprised at the statement above quoted: it was something so new amid the numerous instances of provision against possible disease, or to remedy the inconveniences arising therefrom, that abound in our wonderfully constructed frames,—something so strange to hear that at the moment when the human chrysalis quits its shell, and exchanges its hitherto parasitic life for one of comparative independence,—nay, that in the very act by which foetal life terminates, and intelligent existence commences,—that in that very function, at its birth, there should exist generally, or as a rule, such an imperfection as would tend to future disease. This consideration determined me, if ever occasion offered, to investigate for myself the natural and usual order of events, in the establishment of the respiratory process.

Such an opportunity I enjoyed, in the year 1841, while acting as clinical clerk to Dr. Johnson, in the Rotunda Hospital, to whose kindness in then affording me the opportunity of observing, has now been added that of allowing me to communicate the result of my inquiries.

That I have so long delayed to make this communication depended upon many circumstances, which, trivial in their individuality, have collectively amounted to an impossibility on my part of acting otherwise: and yet this delay has not been without its advantages; for, if I have been somewhat

forced to an obedience to the poet's admonition—

"*Si quid tamen olim
Scripseris, in Mœti decedat judicis aures,
Et patris, et nostrae, nonumque prematur in
annum,
Membris tatus positus.*"

still the fact of so nearly the prescribed number of years having elapsed, and no other observer having (so far as I know of) appeared, gives me additional courage in offering my experience to your consideration.

Before proceeding to a minute account of the observations themselves, it may be well to state my method of proceeding, and the conclusions I attempt to establish, leaving it to your judgment, gentlemen, to determine whether, and how far, my method has been suited to the matter in hand, and what amount of certainty is to be allowed to my conclusions.

My method was twofold—viz. observation on the living, and experiment on the still-born fetus. The first in interest and importance (especially on any physiological question) is, of course, observation on the living subject. This is even more than usually so in the present instance, for observation of stethoscopic phenomena partakes (allowing the observer credit for a tolerable ear of good faith) so much of the nature of experiment, as to impart to its results much of the physical certainty of the latter means of investigation. Thus, when a moderately good stethoscopist assures me, that in any portion of the lungs he hears undoubted vesicular murmur, I am almost (if not altogether) as sure that the air does permeate such portion of lungs, as if the same observer told me that he had removed the thoracic walls, and seen the lung so inflated. I proceeded, then, in the following manner. Whenever I happened to be in a labour ward, at the moment of a child's birth, if not engaged in some matter of importance to the mother, or prevented by some more pressing duty, I made an examination, with the stethoscope, over the whole chest of such child. I generally began with the left side, as being that which was said to be the last to act (which gives a certain amount of *a fortiori* force to my observations), and quickly applying the cylinder to a great number of points over the chest, both anteriorly and posteriorly (rapidity being allowed, from the well-

* Since this opinion was expressed, in 1840, so many instances of tubercular disease, either confined to the left side, or much more advanced there than at the right, have presented themselves to my observation, and been noted as they occurred, that I am now prepared, from experience, to give my adhesion to the opinion generally held on this point. The numbers in my note-book stand thus:—

27 Cases of tubercular disease confined to the left side of the chest, or *plus* on the more advanced state than in the right.

11 Cases similarly circumstanced at right side.

8 Cases in which both sides are noted as affected, or where no allusion is made to the seat of the disease.

These cases were all either well marked, and of easy diagnosis, or else so long under my care that I entertained no sort of doubt of the real nature of the disease; some of those most obscure in their commencement having gradually, but with painful steadiness, unfolded under my eye all the sad characters of their deadly nature, even to that last dread hour, when baffled art and wearied nature yield his victim to the destroyer.

known rapid succession of the infant's respirations), I satisfied myself that no important amount of lung escaped investigation. It was not, then, children selected for the occasion that I so examined, nor merely those whose healthy appearance attested the perfection of their functions, but all such as offered; nay, I at times waited, when anything unnatural, and tending to weaken the child's powers, was known to exist, in order to put the question to the test of what might be looked upon as an "experimentum crucis." Whenever any child, so examined, died before leaving the house, I gladly availed myself of the opportunity of examining their lungs to ascertain whether any portion was still unexpanded.

And though the absence of such condition does not argue much for my view in a positive manner, still it is of importance to remember that I never found any portion of any child's lung unexpanded whose respiration I had, on auscultation, pronounced to be universally established.

With regard to the experiments, I was at first in the habit of removing from the body the larynx, trachea, and lungs of such still-born children as I could procure for the purpose, and introducing a gum elastic catheter into the wind-pipe, tying the latter thereon: I then placed the lungs in water, and inflated, being the same force as that employed in artificial respiration. I soon perceived that I thus did too much violence to the parts, and laid my process open to the objection, "that I placed the lungs in exactly the same position, with regard to pressure on them, or interference with the entrance of air; whereas such or such inequality on these conditions, might be imagined to exist in the natural position." I therefore began to employ the more unexceptional plan of introducing the catheter through the mouth, and inner glottidis; tying the trachea thereon as before, I then removed the anterior part of the thorax.* I proceeded to inflate, watching, meanwhile, the progress of the air as it expanded the lungs: an interesting and beautiful little experiment, as showing, as nearly as may be shown, the process

by which is inhaled that breath, which expiration causes the first infant cry, that declares the rubicon is passed,—the battle of life begun.

But if, gentlemen, I were to confine myself to general expressions of my own convictions, I am aware that opinion only, not argument, would be advanced. I pass on, therefore, to a detail of individual facts.

1. I examined, in the manner above described, the chests of sixty-eight living children, within the few moments that generally intervene between birth and the process of dressing. The notes taken at the time lie before me; and, in order to render more evident their bearing on the point in question, I proceed to a detailed analysis of the results.

Of these sixty-four the majority were born after natural labours, during the course of which nothing untoward had happened; and, as such is the natural,—i. e. usual,—manner of our entrance on the stormy stage of life, their cases are fairly entitled to be considered as a type of what generally occurs in the mode of change from foetal to extra-uterine life, in the establishment of the new functions which are the principal features of the latter state of existence. There were 46 such cases; in 24 of these the children were boys; in 11, girls. The sex of the remaining 11 is not mentioned in my notes. I have noted eight of these 46 as fine children, two as weak. On the remaining 36 no remark is made. they may, therefore, be looked upon as of average size, strength, and healthy conformation,—so far, at least, as my judgment led me to conclude. Of these 46 the examination was made within the five minutes immediately succeeding birth. In all of them, without exception, I found the left lung as *fully, universally, and early* active as the right; while in four cases (of three boys and one girl), which merit separate notice, the stethoscopic examination was made before the funis was tied, and while its lively pulsations showed that foetal life still exercised its peculiar distinguishing function, and that that process which was to render unnecessary, and to sever, this intimate union between the mother and her offspring, had already commenced; that in both lungs, and equally as well as universally, in both, respiration was established.

Two of these 46 children died in the

* Leaving the clavicles connected by the first bone of the sternum in their natural position, the trachea being thus preserved from any pressure or displacement that might interrupt the natural order of events.

house (probably of trismus, though this is not mentioned in my notes). On examination of their bodies I found both lungs equally and perfectly inflated.

In the case of a boy, in whom, though born after natural labour, considerable difficulty was experienced in procuring satisfactory respiration (my notes do not mention what means were had recourse to, nor what time was required for this purpose), yet in ten minutes after this object was considered attained, I made the usual examination, and found both lungs equally and satisfactorily active.

In two children born after tedious labours, with whom a like difficulty was experienced, the stethoscopic examination (made in one case twenty minutes, in the other thirty minutes, after birth) gave a similar result.

In one case of a very large female child, whose head having been expelled a long time, assistance became necessary to complete the birth, at which time the pulse beat forty, and the respirations were but two in the minute, yet in ten minutes after I found both both lungs acting equally and fully.

In one case of a female child delivered with the forceps, for the preservation of whose life, which appeared very precarious, artificial respiration was deemed necessary; and in consequence of repeated relapses was three times had recourse to, at last with complete success, and in three minutes after I found an equal and full activity at both sides of the chest. This child had hare-lip and cleft palate.

In two cases of face presentation (in one of which considerable tumefaction of the head existed) I made the usual examination five minutes after birth, with the same result.

Five children were of plural births; one pair being twins, the others the three survivors of twin births, whose fellows had perished. In all of these the examination was made within five minutes after birth, and in all I then found respiration equally and fully established in both lungs. One of these children was between the seventh and eighth month (its fellow had been blighted about the fourth month), and subsequently died, when, on post-mortem examination, I found both lungs completely inflated. Of these five children,

two were footlings, the others head presentations.

Three children of single births were likewise footlings: one of these, delivered without difficulty, and examined within ten minutes after birth, was found with respiration fully established in both lungs. In another there was a good deal of difficulty in delivering the head, the cord being compressed, and having ceased to pulsate, yet in ten minutes after birth a similar result was ascertained. In the remaining case great difficulty was experienced in bringing down the shoulders. One clavicle was fractured (I regret to say my notes do not mention which, but my impression is that it was the left). Here, too, in ten minutes after birth respiration was ascertained to be equally and fully established in both lungs.

In two cases the funis presented with the head: in one of which it was compressed, and had ceased to pulsate for two minutes; yet in ten minutes after birth respiration was fully established at both sides of the chest, a result which I found to have taken place in the other case within five minutes after birth. Thus, in sixty-three cases of children born under varying circumstances of ease or difficulty, was not one exception found to the rule that both lungs begin to act simultaneously, and that this function is, in both, fully established within a few minutes after birth. No matter whether they were born sturdy asserters of the rights of man, or feeble, scarce audible suppliants for the blessings of life, alike in both, once life could be said to be established, was that function, the expression of whose existence is almost synonymous with life itself, found in equal, full, and universal exercise at both sides of the chest. Is it, then, too much to assert that no such inequality as that under consideration exists? that here, as in all His works, perfection still marks the master-hand of Nature's God!

II. The experiments performed on the lungs of still-born children were four or five conducted in the manner first described: that is, by removing the organs from the body previous to inflation. In all of these the left lung was fully inflated as soon as the right: nay, more, in two of them this took place ~~sooner at the left than at the right side,~~ purely accidental, and

dependent on the presence, in the right bronchus, of a plug of mucus.

The remaining six or seven experiments were conducted on the amended plan, the organs being *in situ*. In these the progress of the air was perfectly alike in both lungs; the action completely synchronous. I observed that the inflation proceeded from the centre to the periphery, the fine edges of the lobes being the last to fill, but all being complete in as short a time as it takes to describe the process.

Perhaps, gentlemen, I should here be silent; still, as my object is the eliciting of information on an interesting and not unimportant point, I cannot avoid appealing to another source of argument, confirmatory of the position I attempt to maintain. I would, then, ask gentlemen who are familiar with the "post-mortem" appearances in newborn infants (and many more competent to speak than I, are present), I would ask them, what is their experience of the frequency with which an unexpanded condition of a portion of lung is found in subjects who have breathed even for a few moments; and if they have frequently met this state, what has been the relative frequency at the different sides of the chest? I have myself conducted, or been present at, numerous autopsies of children dying soon after birth, and neither possess a note of, nor can charge my memory with a single instance in which such a condition was found in any portion of the lungs of a child in whom respiration had been satisfactorily established. I confess, if it be true that even occasionally, or in any way but as a rare exception, this delay occurs, I am surprised not once to have met with evidence of its existence. It seems to me fair to adduce this experience as negative evidence, which so far supports my position.

I must now, Mr. President and Gentlemen, returning my best thanks for your patient hearing of me so far, commit to your consideration the facts I have adduced, and the deductions I have thence derived; and resigning the post I have occupied as advocate of the views I advance, take upon me the character of the client, who awaits the award of your decision,—of your decision on the bearing of the facts on the question in hand, and the justice of my conclusions therefrom. For the facts themselves I venture to claim your

credence; I pledge myself for their authenticity.

If these observations are novel to others, as they were to me, I call upon those who have the opportunity, to test their accuracy. If others have anticipated me in this investigation, I shall at least have the merit of eliciting their experience; and thus the cause that assembles so many here from their active duties, the cause of science, shall be advanced; for I hold it as an axiom, that no question of physiology can be set at rest without advantage gained to practical medicine.

REPORT OF A CASE OF SCROFULOUS ULCERATION OF THE COMMON CAROTID ARTERY,

FOR WHICH THAT VESSEL WAS LIGATURED,
DEATH RESULTING ON THE FOURTH
DAY AFTER THE OPERATION.

BY FREDERICK ROBINSON, M.D.
Assistant-Surgeon 74th Highlanders.

I was requested to visit Mrs. M——, aged 42, the wife of a private in the 74th, on the evening of January 11th, 1849, at eight o'clock. On my arrival I found her in a half recumbent posture, the whole of her person covered with large coagula of arterial blood. The hæmorrhage proceeded in a stream (as large as that issuing from the medio-cephalic vein of a robust man during phlebotomy) from a small ulcer, deeply situated below the submaxillary gland, on the right side of the neck. The sore presented a dark, unhealthy appearance, and in the centre of it a strong impulse was apparent. I was informed that the hæmorrhage had commenced in the afternoon, after a slight exertion, and had been partly controlled by pressure, until immediately previous to my being sent for, when it became more violent. From the exhausted state of the patient it was evident that the loss of very little more of the vital fluid would cause death; and as no doubt could exist that the bleeding proceeded either from the trunk of the carotid or one of its large branches, it was resolved to place a ligature round the common carotid. Too long an interval would have elapsed before professional assistance could be

obtained to justify a delay, and the operation was accordingly performed, under the disadvantages resulting from an absence of all assistance and advice, as well as some of the requisite instruments, &c. Previously to commencing, the patient's strength had been somewhat improved by the administration of wine. The ligature was applied about one inch below the ulcer. No impulse was discernible in the artery above the thread, but, nevertheless, a tendency was manifested to a recurrence of the bleeding from the ulcer. A compress and bandage, however, had the effect of completely suppressing it. The patient was then put to bed, and ordered to be carefully watched, and to be fed with milk and a little wine.

Progress of the case.—Jan. 12th.—Going on as favourably as could be expected. Pulse 160, and of the hæmorrhagic character. Rested tolerably well. Complaints of coldness of the body and extremities.

13th.—Discharge thin, but healthy. Slight swelling and tenderness of the parts adjacent to the wound. A little impulse apparent in the ulcer. No perceptible pulsation felt when the finger is placed on the space intervening between it, and the part where the vessel was secured. Distinct pulsation below it. (It may here be remarked that Dr. Healy, F.R.C.S.I., of Ennis, kindly saw the case with the writer, and agreed with him in the statement last made.) Wound dressed, and compress applied over the ulcer. Slight mental aberration during the night—from loss of blood? Pulse 112; stronger, and of a less hæmorrhagic character. Less coldness of the surface.

14th.—Has a frequent, irritable cough, —a complaint of long standing, and tendency to sickness. In the afternoon, whilst retching violently, the hæmorrhage returned, but was immediately restrained by pressure, scarcely more than half an ounce of blood being lost. She manifested, notwithstanding, a tendency to syncope, and the pulse became frequent and indistinct. No recurrence of the bleeding took place after this; but she died at nine o'clock on the morning of the 15th, having become gradually exhausted.

Autopsia, nine hours after death.—Neck only examined. The integuments in the region of the wound and ulcer were much puckered in, and adherent to

the subjacent fascia. On a dissection being made of the region occupied by the disease, it was found that the ulcer consisted entirely of a morbid condition of the coats of the common carotid artery, immediately below its bifurcation. The adjacent tissues unaffected by the ulcerative process, forming an elevated cushion round the sore, similar to that observable occasionally in fistulous ulcers. It was of an oblong shape, presenting an irregularly-elevated, ash-coloured surface, near the centre of which a perforation through all the arterial coats capable of containing a crow-quill, existed. Except at this part, the ulceration had not extended quite through the entire coats of the tube, but was confined to the cellular and external surface of the fibrous tunica. The margins of this perforation internally were softened, and of a grey colour; and the adjacent surface, to a small extent, was of a pale pink colour. Maceration, first in water, and afterwards in diluted alcohol, had the effect of changing these appearances in a few days. The lining membrane of the artery which constituted the internal surface of the ulcer became detached, showing a well-defined slough, corresponding in extent to the external surface of the former. Hence it may be inferred that, had the flow of blood through the orifice in the centre been temporarily checked by pressure, the separation of the whole mass by the natural process would have shortly been effected, and the death of the patient instantaneously ensued.*

REMARKS.—From the imperfect history of the case, it appeared that scrofulous ulcers had broken out in the neck in December 1848, and had continued ever since, occasionally nearly healing, and again re-opening. The patient had not, however, the characteristic indications of a strumous diathesis in a marked degree, although of a delicate, sickly appearance, neither had she suffered in other respects from ill health. The cause of death was evidently exhaustion of the vital powers from previous hæmorrhage. The case appears of interest on the following grounds:—

- 1st. The infrequency of the disease.
- 2dly. The fact of the hæmorrhage having occurred to an almost fatal extent eight months previously, and of its

* The coats of the vessel were abnormally thin, soft, and almost as flaccid as a vein.

being then controlled by simple pressure, the ulcer remaining open, but the bleeding not recurring.

The circumstance of hæmorrhage proceeding from so large a vessel, and being effectually suppressed by pressure, is worthy of notice, as affording proof of the applicability of that means in similar cases. It was a somewhat disputed point whether the common carotid artery should be secured on the former occasion. The hæmorrhage was then supposed to have proceeded from a large branch, and not the trunk of the carotid. In that instance the bleeding also commenced when the patient was straining.

3dly. The possible results of the operation, had the patient not died of exhaustion. The difficulties in the way of a successful termination to this case were great. Supposing the patient to have survived the immediate effects of the operation, the free anastomosis, probably arising, would most likely have occasioned frequent hæmorrhage during the separation of the ulcerated mass, whilst the watery condition of the blood, and deficient contractile power of the coats of the artery, would render coagulation slow and imperfect.

The preparation is preserved for the museum at Chatham, and will be the only specimen of the kind in that extensive and valuable collection.

Clare Castle, January 1849.

IS SUICIDE A NECESSARY PROOF OF INSANITY?

WE are not prepared to assert, as our opinion, that the commission of suicide is *invariably the act of an insane mind*; but we maintain, whenever the tendency to self-destruction exists, and a person lays violent hands upon his own life, that the presumption is strongly in favour of the suicide being the consequence of derangement of mind. We know how difficult it often is to prove the fact of insanity in cases about which we entertain no doubt. Many persons are driven to suicide whilst under the influence of a delusion known only to themselves; which delusion, it has been established, has haunted them for years. The coolness, self-possession, cunning, and cleverness which many manifest just prior to the commission of self-destruction is no argument in favour of the presence of *sanity*. The most extraordinary power of control over the thoughts and actions are consistent with the existence of suicidal mania.—*Journal of Psychological Medicine*.

MEDICAL GAZETTE.

FRIDAY, MARCH 1, 1850.

It would seem as if we were again passing into a cycle in the discussions connected with the reform of the profession. The Reply of the Council of the Royal College of Surgeons to the Council of the National Institute, published in our last number,* places us exactly in the position in which we stood on the 3d April, 1845. The letter addressed by the Council of the College to the then National Association of General Practitioners, and published in our number for April 11th of that year,† is the counterpart of the document which, according to some of our contemporaries, is now likely to lead to an internecine war between the College and 13,000 of its members, and consequently to the entire demolition of the former. One of the questions proposed to the College by the Association five years ago, was to the following effect:—"Is the Council of the College disposed to admit to its Board a fair representation of the members of the College in general practice?" The reply then given to this inquiry we subjoin:—

"The Council beg to remind the National Association that the College of Surgeons is not, and never was intended to be, a college of general practitioners; and that the members of the College, under whatever denomination, have no other recognised connection with the College than as surgeons. The College of Surgeons is strictly an institution for the promotion of surgery, practical and scientific, and for testing the qualifications of those who intend to practise surgery. It is true that, under the existing arrangements of the medical profession in this country, the majority of its members are and will be general practitioners: it is true, also,

* See MEDICAL GAZETTE, Feb. 22, page 349.

† See MEDICAL GAZETTE, vol. XXV. p. 505.

that many of the provincial hospital surgeons, though practising the other branches of the profession, have eminently distinguished themselves by their scientific cultivation of surgery; but it will scarcely be doubted that the greater number of those who conjoin with the practice of surgery that of medicine, pharmacy, and midwifery, from the multifarious nature of their pursuits, and from the unceasing demand upon their time and attention in their laborious and responsible avocations, will probably want the opportunities and inducements which are required for the special cultivation of surgery, and will scarcely be found to possess the qualifications for regulating the education of surgeons, and for promoting the great public objects for which the College was founded.*

This answer, it will be perceived, is nearly *totidem verbis* similar to that returned on the 5th instant to the Council of the National Institute; and, in some way or other, the College has for five years contrived to weather the storm, and to survive half-a-dozen attempts to modify or swamp its privileges by medical legislation.

Three distinct questions have been most improperly introduced into this discussion; and they have been so handled that, while they have admirably served the purpose of general vituperation, the published statements have only tended to confuse the minds of a small section of the 13,000 belligerent practitioners, and to leave them in complete darkness as to the real points at issue. The questions to which we refer are:—

1. A modification of the obnoxious charter of 1843, so as to do justice to those members whose claims to the fellowship were then improperly overlooked.

2. The proposed introduction to the Council Board of gentlemen practising pharmacy, &c.

3. The foundation of a new college,

for licensing candidates to practise medicine, *surgery*, and midwifery,—in fact, a College of General Practitioners.

Our remarks are intended for the pacific, and not for the belligerent portion of the profession. It is a great mistake to suppose that any good will arise from the use of violent threats or minatory denunciations of colleges which are already protected by ancient acts and charters, and which have obtained a secure foundation in public opinion. Such a mode of warfare against established institutions can only end in a disgraceful defeat. We should rather show in what respects their rules and bye-laws injure the profession, and point out the practical remedies which can be supplied by legislation.

We have always held that the least defensible part of the conduct of the College towards its members was that which referred to the admissions to the fellowship by the charter of 1843. Under the new regulations it is proposed to remove this grievance by adopting a plan which is, we believe, a modification of that originally suggested by Mr. Guthrie,—namely, to admit to the fellowship, under certain restrictions, all those gentlemen who were members of the College at the date of the issuing of the charter of 1843. The restrictions are—1. That each gentleman must have been a member of the College of *twenty* years' standing; and thus the members of 1842 will not be admissible, except by examination, until 1862. 2. That each candidate shall be recommended by six fellows, whose certificate must be based on a personal knowledge of the individual, his high moral character, and his professional attainments. It must also be certified by these gentlemen that the applicant does not "openly trade" in medicines; and a similar declaration must be made by himself. It will thus

* Ibid. vol. xxxv. p. 907.

be seen that the fellowship is thrown open without examination to all members whose diplomas are dated before the issuing of the charter in 1843, but that no member whose diploma is dated subsequently, will be admitted, except by examination.

The payment of a fee of ten guineas is attached to this mode of admission to the fellowship. It has been said of this scheme that it is a mere device for enriching the coffers of a pauperised College. We take it, on the contrary, to furnish a clear proof that the College could have had no such interested motives, or the Council would not have restricted the admissions to "gentlemen who were members of the College at the date of the charter of her present Majesty, and of twenty years' standing." They would, if influenced by such motives, have thrown open the fellowship to members of eight or ten years' standing, and whose diplomas are of more recent date than the charter.* Further, in conformity to the wishes of many respectable country Associations of members, the Council

* A different interpretation from that which is here given has been put upon the proposed new "Regulations" by a contemporary. The new regulations refer, as we read them, to members of the College before 1843, and not to those gentlemen who have become members since. These can be admitted to the Fellowship only by examination, according to the rules and bye laws issued by the College. The rules at present assign a period of eight and twelve years' membership before examination, so that the members since 1843 will not have to wait twenty or thirty years before admission, and they would gain nothing whatever by waiting. On the contrary, a member of 1849 would be admitted to the Fellowship with examination in 1861, i. e. two years before the member of 1843 without examination. The proposed regulations appear to have been completely misunderstood: and for the information of our readers we here reprint one sentence which appears to us to justify the view which we have taken of their meaning:—

"That this Council do, from year to year, admit to the Fellowship, under the foregoing conditions, the members of the College at the date of the Charter of her present Majesty, as they shall respectively become members of twenty years' standing, until the whole of the list of members of that date shall be gone through."

Of course, all the reasoning founded upon this misunderstanding of plain English goes for nothing.

have declared it to be their intention to make public the terms of the new or supplementary charter, so soon as the sanction of Sir George Grey to their proposed application to the Crown has been obtained.

We do not perceive what more can be done with regard to the first branch of the inquiry—namely, the removal of the grievances inflicted by the charter of 1843. There will be, no doubt, a great difference of opinion respecting the period of membership assigned for admission to the Fellowship: but some fixed term must be taken, and any apparent injustice is removed by every old member reaching this position in rotation. The admission of a very large number at once, by reducing the qualification to ten years' membership, would not only defeat the objects of the institution, but, with the demand of a fee, would justly lay the College open to the imputation of mercenary motives.

With respect to the payment of a fee of ten guineas, it appears to us that it should not be levied on those members who received their diplomas before the date of the charter, and who will succeed to the Fellowship by seniority of standing. There is only one circumstance which, in our opinion, would render such a tax equitable—namely, that every gentleman admitted to the Fellowship under the charter of 1843, should also contribute ten guineas to the College funds. The proceedings of the College are, as we understand them, of a remedial character; and, therefore, either all the unexamined fellows should pay the fee, or all should be admitted gratuitously. It is no answer to this view of the case, to say that the taking out of a diploma of fellowship is optional, and that no one will become a fellow without deriving more than an equivalent benefit in his professional status: this may be quite true, but the question still re-

maine—Why should a number of deserv-
ing members be made to pay fees
of ten guineas because they happened
to be overlooked in the charter of 1843?
They will derive no greater benefit
from the possession of the fellowship
than those who were more fortunate in
having friends to watch their interests,
and who have not been called upon to
contribute a guinea to the College funds.
This is a subject which deserves recon-
sideration.

The term "openly trade in medicines,"
may be liable to ambiguity. The plain
meaning, however, is that the individ-
ual should not keep a shop, or deal,
like a tradesman, in medicines. The
fact that the applicant supplies his
patient with medicines privately, would
therefore, we apprehend, be no bar to
his admission to the Fellowship. The
College is evidently desirous of discour-
teasing the introduction of traders in
drugs, and persons who profit by the
sale of medicines, into the Fellowship;
and we think all will approve of this
resolution, except those who are strongly
wedded to the levelling principles of
the present revolutionary era.

We have now gone through the exam-
ination of one question—namely, that
which refers to the proposed new char-
ter. We invite our readers to consider
whether there are any, and what im-
provements they can suggest. The
charter is not yet granted, and the re-
gulations are still open to reasonable
discussion.

One of our contemporaries says—

"Every post should convey letters to
Sir George Grey, most earnestly and em-
phatically entreating of him *not* to grant a
new charter to the College, and *not* to
amend the existing charter, without first
affording to the members an opportunity
of knowing what alterations in the law it
is proposed to make."

It may save Sir George Grey a
basketful of unnecessary and angry cor-
respondence, and rural practitioners
some reams of paper and sheets of letter

stamps, as well as a great loss of time,
if we here reprint the announcement of
the College of Surgeons:—

"That when the sanction of Sir
George Grey shall be obtained to such
proposed application to the Crown, the
several foregoing resolutions be made
public, in such manner as the President
shall direct."

This proposed postal agitation ap-
pears, therefore, to be based on a false
alarm. The Council of the College in-
tend to give publicity to the proposed
new charter, and the earnest and em-
phatic entreaties of the members with
the Home Minister may be reserved for
some more fitting occasion.

In the meantime, unless the College
and Council should be bodily swept
away by the 13,000 belligerents who
are now said to be up in arms against
them, we propose to consider in our
next number the other two branches of
the inquiry—namely, the admission of
general practitioners to the Council,
and the foundation of a new college.

At the earnest request of many of our
old subscribers, the plan of publishing
a GENERAL INDEX to the first forty
volumes of this journal, has been re-
vived. All have agreed in the necessity
and utility of such a publication; and
it is with some satisfaction, we can an-
nounce that there is now great proba-
bility that the plan will be carried out.
Under the new arrangement, the addi-
tion of about *fifty* names is required to
complete the list. Those of our readers
who are inclined to give their support to
this useful undertaking, will be so good
as to address a letter to the printers of
this Journal, Messrs. Wilson and
Ogilvy, 57, Skinner Street. So soon as
this additional number of subscribers
has been obtained, which it may be ob-
served is absolutely necessary to cover
the expense of publication, the work
will be commenced.

Reviews.

The Journal of Psychological Medicine and Mental Pathology. Edited by FORBES WINSLOW, M.D. No. IX. January 1850. London: Churchill.

ALTHOUGH we have not of late directed the attention of our readers to the *Journal of Psychological Medicine*, the omission has arisen rather from the pressure on our space produced by the accumulation of a large number of medical works, than from any feeling that the contents of the later numbers were of less interest or value than those which have been already noticed by us. This useful publication has now, as we learn from the preface, reached the third year of its existence; and, judging from the articles contained in it, we augur favourably for its continuance.

The part before us contains a series of articles which we have perused with interest. Among the subjects treated are—Hypochondriasis; the Law of Lunacy; Suicide; Politics and Insanity; the Autobiography of the Insane; Cretinism; and a Report on British Lunatic Asylums.

These articles are judiciously put together, and cannot fail to instruct those who consult them.

The section on the *Autobiography of the Insane* throws a novel and curious light upon the mode of access and the peculiar characters of certain forms of insanity. It is not often that men of education who have gone through an attack of this terrible malady can be brought to record their feelings. Some have not the memory; others want the inclination; and others, again, have a dislike to recall impressions probably suggestive of sadness or suffering. A remarkable work of this kind was published a few years since by the Hon. Mr. Percival, entitled "*Narrative of a Gentleman in a state of Insanity.*" With a too indiscriminate censure of medical men and lunatic-asylum keepers, it contained many singular descriptions of the feelings, hallucinations, and delusions of the author, who was a man of education and refinement. We believe the book has been suppressed.

Two curious specimens of autobiography are quoted by Dr. Winslow: the one showing how a high power of rea-

soning may coexist with great moral perversion; the other giving a well-drawn picture of the insidious mode in which insanity becomes developed. The writer of this short history was a clerk or steward in a gentleman's household.

"From July, 1847, to November of the same year, I was highly nervous, and experienced a considerable loss of strength and flesh; spoke sometimes so sharply to those around me as to startle them, and make them fear me. About this time (the beginning of the attack) I felt great anxiety for the eternal salvation of my employer. His brother was lying ill, and I begged that I might visit him, but my offer was refused; I therefore prayed earnestly for his recovery, and had the satisfaction of hearing next day that he was better. Strong hope, mingled with fear, now took possession of me. When at prayer, something would pull at my back, blow in my face as if in derision, and, hovering round my mouth, tried to snatch the words from my lips. At night, when in bed, I felt something press upon my chest, and awoke in great trepidation in the middle of the night, when I sometimes heard music at a distance. These impressions terrified me so much that I dreaded to lie down; then, again, I was afraid of forfeiting God's confidence by committing some undefined sin that I could not resist. Therefore I felt a strong inclination to leave the house of my benefactor, which desire was increased by my imagining that the persons in it would fall into apostasy. Hence I had recourse to prayer with all my heart, with all my power; and while praying nearly fainted. It next occurred to me that my employer had become rich by unjust gains, and that he and his wife would be trodden down in the streets and trampled to death. One evening, while at prayer, I saw a circle descend slowly on my head, and afterwards told my wife that I was the anointed of the Lord, but she did not appear to understand my meaning. Felt that I was very ignorant of the Scriptures; but expected every day that the power of God would instruct me, and that I should be commanded to leave the house on a sudden: so I put all things in order for my departure. On the 9th of March I left; but I was greatly agitated, and wept frequently, being unable to restrain my feelings. About this period I began to see objects like gnats floating before my eyes, and thought that they were wicked spirits watching me; however, I felt satisfied that I was anointed in a very high degree, and that my mission from the Holy Spirit was to walk incessantly about, and

convert the people I met with. As I passed near to them, I believed the Holy Spirit transferred itself from me to them; so I selected the most crowded thoroughfares in the metropolis for the work of conversion, and extended my walks daily, sometimes even into the adjoining counties, and I thought the people often turned round, and looked at me as I passed, with great satisfaction, as if conscious of the blessing I had conferred on them. To see the crowds I had converted, greatly encouraged me in my labours; and now, delighted with my office, I had special revelations. One night, while in bed, I saw the glory of the moon: it was like an horizontal pillar across the moon, which increased in size and radiance as it approached my bed-room window, and I now believed that I was to be a prince, and the high priest of our Saviour. Upon the approach of the morning I felt a burning flame around me, and conceived that it was the glory of God sanctifying me for the work I had to perform. My sensations frequently alarmed me; more than once I was afraid I should go mad, and then I alternately laughed and wept. One day I heard my feet speaking to me, telling me that I should be a king and reign at Jerusalem; and I also heard other voices telling me that I was Dan, the son of Jacob, and should have large possessions at Jerusalem. Thus, having left my home, I wandered over miles of ground, imagining that I was forbidden to sit down or stand still, and, after having walked the whole night, one morning I arrived in Sion Lane, and was, by one of the cottagers, conducted to the house, where I expected to find food and rest. The proprietor, I supposed, was a high churchman; and I expected all the inhabitants would come while I was asleep, and look at me, in order that they might be converted. During the first few weeks of my residence there, many strange fancies came across my brain; with my new companions and the medical gentlemen I conversed freely, and gradually became quite conscious that I had been under delusions which have happily passed away, and my mental health is now, I am grateful to believe, quite restored." (p. 46-48.)

The articles in this journal are not dry disquisitions on mental pathology, as some might be inclined to suppose: they are, on the contrary, drawn up in a way which cannot fail to fix the reader's attention, and they are enlivened with many illustrative anecdotes. The journal is published quarterly, in a cheap form: we strongly recommend it to our readers.

On the Detection and Treatment of Intra-uterine Polypi. By J. Y. SIMPSON, M.D. &c. Pamphlet, 8vo. pp. 22. Edinburgh: Sutherland and Knox. 1860.

THE not unfrequent discovery, after death, of the existence of an intra-uterine polypus which had remained undetected during life, affords proof that we have hitherto wanted the means of diagnosis in such cases. Dr. Simpson's ingenuity and indefatigable industry have supplied the want, and laid the medical profession under no light obligation for putting it in possession, not only of the means of detecting the existence of these morbid growths, but also of bringing them within the reach of treatment.

We extract verbatim the author's description of the means by which he has attained so very desirable an object.

"In 1844, in a communication laid before the Medico-Chirurgical Society of Edinburgh, I proposed a means of safely opening up the cavity of the cervix and body of the uterus, to such an extent as might enable us to introduce a finger into the uterine cavity, for the purpose of diagnosis and operation in this and other diseased states of the organ. The means described consisted in the introduction of sponge-tents into the os and cavity of the uterus, so as gradually to dilate these parts to the degree required. For several years past I have been constantly employing this means of dilatation of the uterine os and cavity, for a variety of purposes and indications. The sponge-tents used by myself and my professional brethren in Edinburgh are manufactured by Duncan, Flockhart, and Co. They are of a narrow conical or pyramidal form; and used of many different sizes and lengths, according to the object in view. These tents are made by dipping a piece of sponge in a strong solution of gum-arabic—tying and compressing this sponge around a central wire, as its axis, into the required conical form, by a continuous layer of whip-cord, drying it thoroughly, removing the cord, and subsequently slightly coating the surface of the tent with tallow, or arunge and wax, to facilitate its introduction. The central wire passes only for half an inch or an inch into the base of the cone, and the opening left by it serves as an aperture to transfuse the tent with the tip of the metallic director, used for guiding and introducing the tents through the os uteri. They are introduced like the uterine sound or the catheter; the handle of the metallic director, with the sponge affixed to it, is held

and manipulated with the left hand, while the fore-finger of the right hand touches the os uteri, in order to guide and direct the apex of the tent into that opening. The old form of sponge-tent used by surgeons, and made of sponge steeped in preparations of wax, required for their expansion and development the aid of heat, in order to dissolve their retaining ingredient. The tent I have described, made by steeping sponge in a solution of gum, requires moisture, and not heat, for the solution of its retaining material, and for the expansion of the sponge. Very generally the secretions of the surrounding mucous canal afford a sufficient quantity of moisture for these two purposes; but if not, a small quantity of tepid water may be injected from time to time into the vagina. Usually a well-made tent takes twenty or thirty hours to expand to its full extent in the os uteri, and dilates to four or five times the diameter it presented in its original compressed state. Generally the first tent opens up the os and cavity of the cervix, and allows the finger ample space to examine sufficiently its contents, and the state of its parietes. If it is necessary to open the uterine cavity higher, to enable the finger to pass into the cavity of the body of the organ, a succession of tents is usually required; and they must be passed completely through the os internum or narrow portion, lying between the cavity of the cervix and cavity of the body of the organ. The use of these tents for a day, generally, as I have already stated, dilates the os uteri and cavity of the cervix sufficiently; and the employment of the sponge is accompanied with little or no feeling of uneasiness. When it is necessary to examine the state and conditions of the interior of the cavity of the body of the organ, the persevering use of a series of larger and larger tents for several days is usually requisite; and the dilatation of the os internum and body of the organ sometimes, but not always, causes a feeling of uneasiness and pain, that may require the use of an opiate. I have omitted to state that the tent is always prepared with a string affixed to its base, to allow of its easy removal. In using sponge-tents, it should be remembered, that when sponge is in contact with the maternal passages for some hours, it always exhales, when removed, a very fetid odour.

"For dilatation of the unimpregnated os uteri, the tent should be selected as regularly conical as possible; and with the apex neither too blunt and rounded to pass the os, nor too slender and flexible so as to double back in the attempt. The spirally-grooved surface of the tent, resulting from the compression of it by the whip-cord

during its manufacture, tends to retain it *in situ* till its expansion commences. It, perhaps, ought to be added, that the introduction of the sponge-tent into the os and cavity of the uterus should be effected without the speculum. The sense of touch serves, in this and some other analogous operations, infinitely better than the sense of sight.

"By the use of sponge-tents introduced daily, and of increasing size and length, we may reach a polypus when affixed and sessile even upon the fundus uteri." (p. 5-7.)

In illustration of the employment of the sponge tents, Dr. Simpson relates several cases in which he has been able to give permanent relief by the removal of polypi.

The symptoms alluded to by Dr. Simpson as indicative of intra-uterine polypus, are—1, menorrhagia; 2, discharges, mucous, purulent, or serous, from the cavity of the uterus; 3, enlargement of the cervix and body of the uterus; 4, symptoms of irritation and pressure on the rectum, bladder, &c. These symptoms, of course, are liable to great variations—some may be entirely absent. But when there shall be reason to suspect the existence of an intra-uterine polypus, or when even it shall simply be desirable positively to exclude this suspicion, we have now the power, by the use of sponge tents, to ascertain the fact. Under careful medical attendance no harm can follow their employment, as any ill effects which may seem to arise from their presence in the cervix can be instantly alleviated by their removal. We must, however, refer our readers to Dr. Simpson's pamphlet for the precautions to be observed in their introduction.

In the treatment of intra-uterine polypi, when brought within reach, Dr. Simpson has used the ligature, the scissors, and the lithotomy forceps to break up the structure.

The author's pamphlet contains several plates, which exhibit the construction of the sponge tents, the kind of instrument most serviceable for tying the pedicle of the polypus, and the external characters of the several forms of growths known as uterine polypi.

The attention of all obstetricians should be directed to the means here brought under their notice by Dr. Simpson, as an aid to diagnosis and treatment.

We shall conclude by remarking that

the author deserves the thanks of the profession for the practical suggestions contained in this scientific pamphlet. In it will be found much useful information on the management of a most obscure and troublesome class of cases.

Parthenogenesis; or, the successive Production of procreating Individuals from a single Ovary: a discourse introductory to the Hunterian Lectures on Generation and Development, for the year 1849, delivered at the Royal College of Surgeons of England. By RICHARD OWEN, F.R.S. &c. &c. 8vo. pp. 76. London: Van Voorst. 1849.

It will not be alleged that the following remarks emanate from ignorance, prejudice, or bigotry:—

"The ablest endeavours here to penetrate to the beginning of things do but carry us, when most successful, a few steps nearer that beginning, and then leave us on the verge of a boundless ocean of the unknown truth, dividing the secondary or subordinate phenomena in the chain of causation from the great First Cause."

"The brief record of Creation in the sacred volume leaves us to infer that certain plastic and spermatic qualities of common matter were operative in the production of the first organized Beings of this planet. 'The earth brought forth grass and herb yielding seed after his kind, and the tree yielding fruit whose seed is in itself.' 'The waters brought forth abundantly the moving creature that hath life,' and 'the earth brought the living creature after his kind, cattle, and creeping thing, and beast of the earth.' But of our own species it is written, 'God created man after his own image, in the image of God created he him; male and female created he them.' And 'God said unto them, Be fruitful and multiply, and replenish the earth.' (Gen. i. 27, 28.)

"Since that first fiat went forth, the propagation of the species of plants, animals, and mankind, has been left to the operation of certain natural secondary cause, which we sum up as the 'act of generation.' " (pp. 1, 2.)

No heavier rebuke could have been administered, than is here administered, to the authors of certain systems of "creation," which, under the specious names of "natural causes," "physical powers," &c. &c., displacing Omnipotence, have introduced a fashionable heathenism which glibly descants upon the profoundest mysteries of nature,

and thinks it has solved all difficulties when it talks of "spontaneous development," and the "galvanic power." When the possessor of a mind of the calibre of Professor Owen's is content to confess his simple belief in the Almighty's "fiat," surely the collectors of scraps of knowledge, the chiffoniers of science, may cease to trouble the stream, and forbear to poison it in its course.

We have been led to these reflections by a consideration of the contrast presented in the humility of a richly stored mind of vast capacity, with the vanity of the pretender to scientific knowledge, as exhibited by the professors of drawing-room learning. The sentiments above expressed are alike honourable to the heart and to the head of the most distinguished physiological anatomist of the day—one upon whom it may indeed be said that the mantle of the great John Hunter has fallen, not lightly, but fitting closely.

In the Lectures before us we trace a full exposition of the doctrine, *omne animal ex ovo*, which was touched upon by Professor Owen in the early part of his first course of lectures on the Invertebrata, delivered in 1843, but in which he then scarcely more than stated, and briefly illustrated, from the mode of propagation by gemmation in the hydra, and other zoophytes. The consideration of this mode of propagation, and of the birth of successive series of Aphides from one individual without a repetition of the original single act of impregnation, constitute the text from which the doctrine of Parthenogenesis is drawn and expounded in the lecturer's most lucid and felicitous style in the two discourses now before us.

In the first Lecture the author treats more particularly of the propagation of hydra by "spontaneous fission," and of the metamorphoses of their gemmations from "the condition of ciliated locomotive bodies called '*planula*' by Sir John Graham Dalyell," to that of *medusa*, and again to that of a "pedunculate polypoid individual." Similar transformations are noticed in other animalcules, *e. g.* by the *Distoma tarda*. "The ova, or products of the ova, of this species are found, early in the summer, adhering in vast numbers to the inner surface of the respiratory cavity and to the exterior of the lobes of the liver and generative organs of the snail, where they increase in size, and

detach themselves as free animalcules, assuming a bright yellow colour, whence they are called by Bojanus 'Koniggelben Würmen,' and manifesting a twisting vermicular motion. If one of these be microscopically examined, none of the lineaments of the organs of the future *Distoma* can be discerned: they resemble in structure rather the *Gregarina*, consisting in fact of little else than the germ-mass, a small proportion of which may be metamorphosed to form the smooth outer skin." (p. 15.) The further development and escape of these from the body of the snail as cercariform animalcules, and their metamorphosis into *Distomata*, are traced by the lecturer.

The special character of our journal forbids our occupying as much space as otherwise we should desire, by extracts from these instructive and exceedingly interesting Lectures. We cannot further follow the author through the additional instances of Parthenogenesis derived from the zoophytic classes. Neither can we follow him in his explanation of Steenstrup's theory of "alternate generations," nor in his criticism of Dr. Carpenter's rejection of Steenstrup's theory—"where *such* doctors disagree, who indeed shall decide?" But this need give us no anxiety; for sure we are, that both have truth, not victory, for their single object, and therefore science will gain by their difference of opinion.

We feel, however, that we should not do justice to the author, nor to the readers of a journal, even of "Practical Medicine," if we omitted to notice the philosophical analogy which the author draws between the development of the plant and the animal, and which he beautifully illustrates by the process of generation in the plant, the polyp, and the insect. Our abstract thereof will necessarily be imperfect without the drawings which accompany the volume.

The pollen tube in the plant represents the spermatozoon in the animal; its contents are received by the ovule, which is afterwards discharged and becomes free. The formation of the embryo takes place by the multiplication of cells. The embryo proceeds to develop the radicle and plumula by the metamorphosis and coalescence of cer-

tain of the impregnated cells, retaining the major part, however, as cells; and thus the first individual plant, or pair of individuals, as in the Dicotyledons, is established.

The ovum of the zoophyte proceeds to develop its free locomotive embryo by an analogous multiplication of cells—the embryo settles, subsides, shoots out rays, analogous to the radicle of the plant, but for attachment only, and grows afterwards as a stem, from which a polype is speedily developed, answering to the first cotyledonal leaf or leaves in the plant. Both the plant and the zoophyte proceed to develop by germination, the one a succession of leaves, the other of polypes, associated by the continuous growth of the connecting parts: and finally the plants, by a metamorphosis of part of the stem and certain leaves, produces the flower or fructification; and the zoophyte, by a modification also of its stem and certain polypes, produces an ovarian vesicle, or a modified polype, or a medusiform individual which is set free: in both cases the end to be obtained is the diffusion of the species by means of impregnated seed or ova.

A comparison of the stages intervening between the ovum and the perfect male and female individuals of the aphid "shows the analogy between these stages in the plant, the polype, and the insect, to be both true and clear.

The spermatozoon of the male aphid answers to the pollen filament of the male leaf or stamen. The ovum of the female aphid answers to the ovule of the female leaf or pistil: by their combination the impregnated ovum results. The same processes of cell formation ensue, and the embryo aphid is formed by the combination and metamorphosis of certain of these secondary germ-cells; but it retains the rest as a germ-mass in its interior, which may be compared with the cells of the pith of the plant, and with the cells or nuclear granules in the corresponding more fluid part of the pith of the polype. Under favourable circumstances of nutriment and warmth, certain portions of the retained germ-mass repeat the process of embryonic formation, and a larval individual, like that from the ovum, is thus reproduced; which is only not retained in connection with its parent because the abdominal integument is not co-extended with it.

* British and Foreign Medico-Chirurgical Review, vol. i. 1848. A most instructive essay on the metamorphosis of zoophytes.

The generation of a larval aphid may be repeated from seven to eleven times without any more accession to the primary spermatid virtue of the retained germ-masses than in the case of the zoophyte or plant. At length, however, the last apterous or larval aphid so developed proceeds to be "metamorphosed," as it is termed, into a winged individual, in which only the fertilizing filaments are formed, as in the case of the stamens of the plant; another larval aphid perfects the female generative organs, and develops the ovules, as in the case of the pistil. We have, in fact, at length male and female individuals preceded by reproductive individuals of a lower or arrested grade of organization, analogous to the gemmiparous polypes of the zoophyte, and the leaves of the plant.

From plants to aphides inclusive, the phenomena of Parthenogenesis is presented under manifold modifications, alike in this essential, that they are all examples of organised beings from the impregnated ovum of which many individuals may be successively developed. (pp. 58-62.)

Although not rendered verbatim in the author's language, we think we have presented our readers with enough to render them desirous to consult these lectures for themselves. The strictly medical student will scarcely digress from his own immediate studies by the perusal of a volume which contains all the fundamental points of our knowledge of the physiology of generation; while the medical practitioner who combines a taste for scientific knowledge with that of his own profession, may here find in this little volume a vast field of natural history wherein he may roam with delight and advantage.

Proceedings of Societies.

LIVERPOOL MEDICAL AND PATHOLOGICAL SOCIETY.

Feb. 7th, 1850.

Extensive Disease within the Cavity of the Abdomen — Deposit of Cholesteroline in the Liver, and several external sub-cutaneous Tumors. By Mr. LONG.

A GENTLEMAN, æt. 52, of spare habit, sallow complexion, and of exceedingly great

activity of both mind and body, temperate in his habits, and of remarkably cheerful disposition, enjoyed excellent health until about three years ago, when he consulted me in consequence of great depression of spirits and occasional vomiting of a greenish copperas-looking fluid. He soon got over this, and continued perfectly well, and followed his avocation—that of a sculptor—with unceasing energy. On May 14th of last year he called upon me, being urged to do so by his family, who had for some period thought he had grown thinner, and did not enjoy his meals as usual. Upon questioning him he said there was nothing much the matter with him: that he had been out to a friend's house a few evenings before, and had drunk a glass of porter, which had disagreed with him; but he thought he should soon be well. I noticed, however, that he was thinner than usual, and that his complexion had a darker tinge. I examined his abdomen, and found it tumid, with an obscure sense of fluctuation, but no pain on pressure. He directed my attention to a small tumor at the upper half of the umbilicus: it was about the size of a hazel-nut, hard to the touch, and gave him some uneasiness: it seemed imbedded in the aponeurosis; consequently was not moveable, and produced pain when pressed upon. He told me he had noticed this tumor three weeks previously: it was then the size of a pea, and very moveable. He was anxious to have it removed: he was more uneasy about it than about anything else; the fluctuation became more distinct, the tumor increased, and shooting pains proceeded from it. He became more and more emaciated, and vomiting took place, at first of bilious, afterwards of a coffee-ground character. At this period—viz. early in June—the vomiting and nausea became most distressing: placing his hand on his right side, he said, "All I take stops here;" and he frequently introduced his finger into his throat, to get up the "nasty stuff." All the symptoms rapidly got worse, medicines were of no avail, and he died on the 6th of July; two months not having elapsed from the period he called upon me.

The umbilical tumor had gradually enlarged and become more painful, still retaining its hard feel. About three weeks before his death he pointed out to me a small tumor in the epigastric region, about the size of a swan-shot: it was hard and moveable. On examination, I found several such tumors, varying in size from a millet-seed to a swan-shot, scattered about the epigastric region; these increased in number and size, so that at the time of his death there were dozens of them in the same region, extending also over the lower

part of the sternum and along the margins of the cartilages of the ribs on the right side: the largest was the size of a pea.

Post-mortem, 36 hours after death.—Emaciation extreme; umbilical tumor the size of half a walnut, incorporated with the abdominal aponeurosis; when cut into, presented a firm texture and striated appearance, the centre of a darkish hue. The other tumors presented the same characters, except that the smaller had no central dark spot. Abdomen contained about three gallons of a clear amber-coloured fluid, without flakes or shreds. The surface of the parietal peritoneum extending in the course of the urachus from the umbilicus to the bladder completely studded with small white fine bodies, some distinct and round, others flattened and coalescing with the neighbouring ones: they seemed developed in the sub-peritoneal cellular tissue; their disposition was peculiar; they were arranged in the form of a triangle,—the base at the bladder, the apex at the umbilicus. Similar bodies followed the course of the round ligament, and were more numerous: they were likewise disposed in a conical form, the apex at the umbilicus, the base upwards towards the epigastric and right hypochondriac regions (miliary tubercles). The omentum was not to be found at first; but, on further examination, it was found crumpled up under the liver, and extending into the right lumbar region, binding down and covering the duodenum and colon, being degenerated into a firm friable mass (scirrho-tubercular), its natural texture having entirely disappeared. The peritoneal coat of the stomach and intestines perfectly healthy; also the mesenteric glands, the right kidney, spleen, and pancreas.

Interior of stomach perfectly healthy, with the exception of one or two small bloody points; pylorus perfectly healthy. The walls of the duodenum were preternaturally thin; the vulvulae conniventes scarcely perceptible; the mucous surface of a dark-red colour, and appeared as if it had been scraped; a profusion of bloody points existed, and a coffee-ground fluid was contained in it. All the remainder of the intestinal canal was healthy, and a quantity of pultaceous faeces of a bright yellow colour existed in the sigmoid flexure of the colon. Liver small and wrinkled, of a bluish spleen-like colour, and tough consistence: when cut into, it presented the appearance of a section of the spleen, but much tougher, of the consistence of a lung long compressed by a pleuritic effusion; it had none of the usual appearances of a section of the liver (atrophy? cirrhosis?) A boggy place was felt on the upper surface of the left lobe: when cut into, it gave

exit to about a tea-cupful of currant-jam-like fluid (broken-down liver), containing a number of pea-like bodies, some the size of a pin's head, others as large as a small shot: these, when collected, were about sufficient in number to fill a dessert-spoon; they were found to be cholesterine, and flakes of the same substance were found, by the aid of the microscope, to exist in the gummy fluid which escaped with them from the interior of the sac: the interior of the sac, when emptied, was large enough to contain a small orange: it was lined by a beautifully shining fibrous membrane, and presented four or five oblique apertures large enough to admit the extremity of the handle of the scalpel; there were found to be cul-de-sac not extending further than a few lines (obliterated hepatic veins). The gall-bladder was small, about half filled with dark bile: time did not permit the ducts to be minutely examined; but bile must have passed into the duodenum; for it had been vomited, and the faeces in the sigmoid flexure of the colon were deeply coloured with it.

The left kidney contained a round brownish red mass, of soft consistence, of the size of an ordinary marble: though perfectly round, it did not appear to possess a capsule, and had a closer resemblance to the crumbly substance of the brain than anything else (fungus hæmatodes?).

I may mention that the wife of this gentleman died about four or five years ago, under my care, from ulcerated scirrhous uteri.

Remarkable Suicide by a Lunatic. By Mr. J. H. TAYLOR.

John Robinson, a married man, æt. 34, was admitted into the asylum of the workhouse on the 24th of November last, having been in a desponding melancholy state some time, caused by religious delusions. He had attempted to destroy himself several times by throwing himself out of the window, and rushing into the fire, and said he felt a desire to hang himself. On admission, his hands were found much burnt. He refused his food for some days, but continued gradually to improve for the ensuing six weeks, and went to bed in a tranquil state on the evening of the 5th inst. about 9 P.M. He was found next morning, at half-past 6, suspended to a bar of the window of his cell by means of the bandage which he had taken from his hands and folded double. His wrists were fastened together behind his back by a piece of bandage, in which two running nooses had been made, and slipped over his hands, and then pulled tight. His ankles were tightly fastened together, and

his night-cap was pulled down over his face below his nose. The toes almost, if not quite, touched the ground; the body hanging between the bed and a night-chair, with the face towards the wall.

On cutting him down, it was apparent, from the coldness and rigidity of the body, that he had been dead some time. The features were quite composed. No discolouration of the face: eyes in the natural position,—if anything a little depressed; no froth at the mouth, or protrusion of the tongue, or lividity of the neck; but on the right side, extending nearly from the angle of the jaw to the commencement of the thyroid cartilage. The skin was cut through, as if with a blunt knife, to the depth of nearly a quarter of an inch. The hands and feet were extended, and pointed downwards. No erection of the penis, or emission of semen, urine, or feces. The body, in fact, presented the appearances of that of a person dying from other causes and being afterwards suspended. It was only the absence of suspicion of any kind that made the cause of death appear satisfactory. He must have first taken the bandages from his hands and cut them into suitable pieces, then stood on the night-chair, then tied his legs, then fastened the noose round his neck and pulled the cap over his face, and, lastly, slipped his hands behind his back into the nooses over his wrists, and then jumped off.

His friends would not permit a post-mortem examination, and the coroner did not consider any medical evidence requisite.

Protrusion of the Eyeball by an Orbital Tumor.

A man was struck on his left eye six years since, and had severe pain, which entirely subsided until last autumn. The pain then became severe and aching, and the sight was quickly lost. In three months the eye began to protrude, and since then it has continued to do so; the sight is now perfectly gone. The cause of the protrusion is very obscure, probably some solid tumor. There is no paralysis of any other nerve on that side.

Dr. SANDIE said that a case was reported in the *Medico-Chirurgical Journal*, in which a woman was severely injured by a blow upon the pelvis in June. She was taken to the hospital in August, and died. A large malignant tumor was found, extending from the kidney to the pelvis, and the pelvic bone was diseased, which was probably caused by the blow, as the disease of the bone corresponded with the seat of the injury. The sacrum and os ileum were

partially dislocated, and rather moveable upon one another.

Dr. H. TAYLOR thought Dr. Sandie's suggestion a good one, that the protrusion was caused by disease of the bone.

Mr. BANNER said, people often continue long in health after a blow, until a malignant tumor develops from the blow. A man had a blow on the superciliary ridge: a tumor formed in the orbit, and the vision became lost. The tumor was considered, on consultation, to be non-malignant, and was removed; but the man died in a year of malignant disease of the brain.

Another man was struck above the orbit by an iron hook: a tumor formed, and the eye was protruded; the tumor was punctured, and the man bled to death.

ACADEMY OF MEDICINE, PARIS.

Feb. 12, 1850.

PRESIDENT, M. BRICHETEAU.

New Pessary.

M. RICHARD (of Toulouse) submitted an essay on "*Hystéroplosis*," accompanying which was a new pessary invented by himself, and considered by the author to possess considerable advantages over those generally in use.

Treatment of Cholera by Medicinal Injections.

M. GUYON (of Clermont Ferrand) transmitted a note relative to the treatment of cholera by the subcutaneous injections of quinine, nitrate of silver, and oxygen gas. M. Guyon indicated the abdominal region as the most suitable for these injections.

Chinese Medical Encyclopædia.

M. DE PARAVEY called attention to a Chinese work, entitled "*Peu-Tdad-Hang-Mon*,"—a sort of medical encyclopædia, which treats of all the productions of the animal, vegetable, and mineral kingdoms, useful in medicine and the arts of all kinds.

Treatment of Tubercular Meningitis by Iodide of Potassium.

M. LAFOREN (of Agen) stated that he had successfully employed the iodide of potassium in tubercular meningitis, to the extent of three grammes (45 grs.) daily.

Citrate of Magnesia.

M. ROBINET read, in the name of the Commission on Secret Remedies, an official report on the Citrate of Magnesia, and its pharmaceutical preparations. The report, after a long discussion, was returned to the Commission, to the members of which

were joined MM. Adelon, Bégin, and Caumont.

SURGICAL SOCIETY OF PARIS.

Feb. 13, 1850.

PRESIDENT, M. DEGUISE, *père*.

Pathological Anatomy—Fracture of the Neck of the Femur.

M. CHASSAIGNAC stated that he had noticed the occurrence which was mentioned by M. Huguier at the last meeting of the Society—viz. that of fracture of the neck of the femur, without the manifestation of any signs by which it could be detected during life. M. Chassaignac related a case in point. This case, however, possessed this important difference, that the fracture in M. Chassaignac's case was exclusively intra-capsular.

M. MOREL-LAVALLÉE observed, that M. Chassaignac's case afforded another exception to the rule laid down by Boyer, that in fracture of the neck of the femur the patient is unable to raise the limb.

Observations on Hydatid Cysts of the Abdomen.

M. VIDAL, in the name of M. Goyraud (of Aix), presented a paper in which the author objected to exploratory punctures as a means of diagnosis. The author had seen fatal peritonitis follow. The opening of these tumors by caustic was advised by M. Goyraud.

M. GIRAUDES did not concur in the objection to exploratory punctures, and observed that when effusion occurs it is often harmless.

Pathological Anatomy—Examination of a False Joint.

The false joint in the case adduced had existed many years. The muscles had not undergone any change. The capsule of the false joint was firm, and studded on its surface with osseous and cartilaginous plates: it possessed a perfect synovial membrane. The broken extremities of the bone were both incrustated with cartilage. The superior portion was concave, the inferior convex; but these were not in contact.

Purulent Ophthalmia.

M. H. LARREY stated that this disease had appeared epidemically in a regiment under his charge.

Hospital and Infirmary Reports.

KING'S COLLEGE HOSPITAL.

On Feb. 16 several patients were brought into the theatre to undergo operations, which were all of a particularly interesting character. The first introduced was a middle-aged woman, otherwise very healthy, who had been suffering some time with a large tumor of the right mamma. She stated that it commenced as a small swelling five years ago, but it was not very troublesome to her, as it produced scarcely any pain. It, however, gradually increased in size, but it was not until within the last three months that it became painful: this circumstance induced her to apply for relief, and she was admitted about a fortnight ago into the hospital, under Mr. Bowman's care. The tumor, involving the mamma, was as large as the fist; was moveable, and for the greater part solid. On the most prominent portion, however, there was an appearance and sensation as though there was a cyst containing fluid. The nipple was not at all retracted, nor was the skin at all adherent to the tumor. Thus in none of these symptoms was there any feature of malignity, and the general condition of the patient indicated nothing of the kind; and it was most probable that the tumor was one of those denominated cystic sarcoma. Two days previous to the operation Mr. Bowman explored the tumor by a puncture, and discovered the presence of fluid, and thus, to a certain extent, made out its proper character.

The patient being placed under the influence of chloroform, the whole of the morbid mass was carefully and effectually removed by Mr. Bowman. Nothing peculiar occurred during the operation. On cutting into the tumor it was discovered to be a case of cystic sarcoma, the solid portion greatly predominating.

The next operation performed was one which is now not very frequently seen, although in former years a great rage existed for making new noses after the Indian method, introduced into England by the late Mr. Carpué, and practised considerably by the late Mr. Liston and others.

The patient, who was to submit to the Taliaacotian operation, was a young man who had lost the most prominent portion of that useful and ornamental organ, the nose. It appeared that some years ago he had received a severe blow on the nose, which caused a fracture, consequent in-

inflammation, and destruction of the bones by necrosis. Thus, the bridge being lost, the organ was shorn very much of its due proportion, and the alæ were depressed almost on a level with the other parts of the face. Mr. Fergusson stated that about twelve months ago this same patient had applied to him in consequence of having some disease of the frontal bone; he had at that time made an incision in the forehead, and since then a portion of necrosed bone had come away. Seeing at that time the condition of the nose, and the likelihood of his performing an operation to remedy that state of things, he had made the incision in the forehead in such a manner as would not interfere with the subsequent steps which at a future time might be required.

Mr. Fergusson commenced the operation, which was necessarily one both tedious and requiring great nicety of dissection, in the following manner:—An incision was made on each side of the nose, and carried through the alæ, as far as the root nearly: these incisions were made deeply, and the alæ well separated from the centre of the nose on each side. A piece of leather, which had first been cut to the size of the flap which was to form the new nose, was then placed upon the forehead, and an exactly similarly sized piece of integument dissected up from the forehead, by cutting around the edges of the leather. The bleeding, which was here very free, was checked by means of exposure to the cold air and a ligature or two. The flap of skin was then brought down over the old nose; the cut surface being adapted to the incisions in the latter by twisting it round, leaving a narrow connection to the sound skin of the forehead, between the eyebrows. The edges of this flap were then brought into apposition with the sides of the incised parts of the nose, and there retained by stitches. An ample covering was found to be formed by this means, and the patient was removed from the theatre. He had evidently been enjoying some pleasant visions of the organ which it is to be hoped will be amply restored to him, as his first exclamation on waking from the chloroform was an anxious inquiry about "that Grecian nose which Mr. Fergusson had promised him."

The next patient upon whom Mr. Fergusson operated presented an instance of a somewhat rare and interesting morbid affection of the hand, consisting of an enchondromatous tumor of the bones of the phalanx and metacarpus. The poor woman, who was about the middle age, stated that, about four years ago, she had knocked her hand against a fire-grate, and that ever

since she had suffered pain in it, and shortly afterwards a tumor arose on the ring finger, which steadily increased in size. It gave her considerable pain; but, for the last twelve months, she had suffered most intensely both night and day, and in consequence applied to the hospital. On examination there were found two tumors, one on the back of the metacarpal bone of the ring finger, the other in front of the phalanx of the same. The former was the most prominent, and it was so extensive that it was impossible to say if it did not involve the metacarpal bone of the middle finger as well. The morbid parts were most acutely painful, and the patient could not bear the least pressure upon them. On her admission leeches were applied, but they gave no relief, and she was anxious to have an operation performed, as her hand was quite crippled. Mr. Fergusson determined to save the greater portion of her hand; but, as it was thought that the two fingers and metacarpal bones were involved, he removed both of them. On dissecting the parts, each of the tumors was found to consist of that structure termed enchondroma; and, although it was discovered that they grew from the ring finger and metacarpal bone alone, yet the latter of the two so involved the middle finger, that the bone was much absorbed.

LONDON HOSPITAL.

Partial Dislocation of the Calceo-cuboid Articulation.

THOMAS GRIFFITHS, *etat.* 20, labourer in the London Docks, a spare, thin man, was admitted at 3 P.M. Jan. 14th, into the London Hospital, under Mr. Curling, being unable to walk. He stated that he was assisting to place some Havannah boxes on a truck, before the wheels of which was placed a small plank to prevent its motion forwards, the patient putting his right foot firmly against the plank. Suddenly one of the heavy boxes slipped forwards from its position on the truck, whereby the iron wheel on that side was propelled forcibly against the outer side of his foot. He immediately felt great pain, and became faint; and, not being able to put his foot to the ground, was sent to the hospital in a cab. Upon examination no fracture could be detected, but there was a considerable projection on the outside of the foot in front of the ankle, which was found to be caused by a displacement upwards of that portion of the os calcis which is articulated with the os cuboides, which latter bone could be easily felt in the de-

pression existing in front. The projecting bone also obeyed every motion of the os calcis when moved laterally from the heel; and, from the fact of the man possessing very slight muscular development, the peculiarity of the accident was easily diagnosed, but was not rectified with the same facility. The leg was flexed upon the thigh, and the foot also flexed to its greatest extent, while at the same time pressure was made upon the displaced bone with the thumbs; but no force could reduce it entirely to its normal position, although it did not project to more than a third of its former extent. Warm fomentations were applied over the foot, and the next day the leg was placed on an outside splint, having the foot-piece at an acute angle, so as to keep the foot flexed as much as possible. Considerable inflammation ensued, after the subsidence of which a gutta serena splint was adapted to the outside of the foot, being applied after immersion in hot water, so that, adapting itself to every irregularity on the surface, produced an equable and firm support. He kept his bed for a fortnight, owing to the continual pain which he experienced in the part; and, at the end of a month, was able to walk about the ward by the aid of a stick; still, however, complaining of very great weakness when bearing too heavily on that leg. On Feb. 12 he was discharged from the hospital, and directed to attend as an out-patient, having gained additional strength in progression; but still the irregularity opposite the calceo-cuboid articulation remained as before.

In this accident, which is interesting because of its rarity, the superior calceo-cuboid ligaments must have been lacerated, as, from their weak structure and peculiar shortness, it is difficult to conceive how they could have stretched sufficiently to allow of the extremity of the os calcis to project upwards to the extent which it was found to do on his admission. Not so, however, the inferior ligament passing between these two lower, which, from being a more dense and elastic structure, might easily have yielded sufficiently for the purpose. It would appear, on consideration of the direction in which the displacing force was applied, and the oblique position of the foot at the time of the accident, that, had the force been more violent, or the calceo-scapoid articulation less secured by ligaments, dislocation upwards and inwards of the head of the astragalus would have ensued.

Correspondence.

SUDDEN DEATH OF AN INFANT FROM UNEXPLAINED CAUSES.

SIR,—The following case has not appeared before the medical public, but may probably be considered of sufficient interest to be recorded in your journal.

On Saturday evening, 19th ult., a child, 18 months old, was brought to me in a state of great exhaustion. The parents stated, after a slight cough it threw up a quantity of blood, they supposed about a quart, through the mouth and nose. In less than two hours I visited the child, when I found it sinking, and within a quarter of an hour after I entered the house it expired.

A post-mortem examination on the Friday following was made by Mr. Snow and myself. In the chest, the left lung was slightly congested, the heart flaccid, and a large quantity of fluid in the pericardium. In the abdomen, the stomach had a dark livid appearance, and contained some loose matter. The large intestines and spleen were redder than in health. The other viscera healthy. On the scrotum was a dark livid spot. We removed the diseased parts, and submitted them to Dr. Letheby for analytical examination. Dr. L. opened the stomach, and found three or four ounces of dark grumous blood, and upon carefully washing it out, the villous coat was observed to be dissolved, and several spots of ecchymosis on the remaining coats. The analysis showed slight traces of mercury and oxalic acid, but nothing to account for the great disorganisation that had taken place. The above appears to be a case standing almost alone, if arising from natural causes. Dr. West, in his *Lectures upon Diseases of Children*, published in the *MEDICAL GAZETTE*, 1848, p. 1016, says—"Among those diseases too seldom met with for any one person to have what can be called real experience about them, may be mentioned vomiting of blood, occasionally observed in infants and young children."

—I am, sir,

Your obedient servant,
W. NIX.

11, Saville Row, Mile End Road,
Feb. 26th, 1850.

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 22d ultimo:—Messrs. R. Nasmyth, T. H. Waterworth, W. Dewsnap, J. B. Penn, C. C. Hayman, W. Filliter, R. F. Foote, G. S. Gabb, R. Evans, M. Kebbrell.

Statistical Intelligence.

MEETING OF GRADUATES OF THE UNIVERSITY OF LONDON.

A GENERAL meeting of graduates of the University of London was held at the Freemasons' Tavern, on Tuesday evening last, for the purpose of considering the propriety of adopting measures for securing for themselves a charter of incorporation, and also for receiving a report on that subject from a committee appointed at a previous meeting. Dr. Sibson, F.R.S., presided, and in opening the proceedings remarked, that the meeting had not been convened to cause disunion, but for the promotion of order and organisation. All present must be convinced that their degrees were of great value, and that they had bought them at the highest price of intellect. But still the graduates were left in this unfortunate position—that while they were acquainted with the value of the degrees, their importance was unknown to the world at large. Their degrees had been obtained by much intellectual labour and much mental cultivation, and yet to the majority of intelligent men in England the very existence of the university was unknown! Its dwelling-place was on a common staircase, just above a school of design, with rooms insufficient to hold the candidates who presented themselves. The council were in fact unable to hold their examinations in their own building, but were obliged to borrow rooms from King's College. The chairman concluded by expressing a hope that the graduates would soon be enabled to boast of a great metropolitan university, and urged upon the meeting, the duty of labouring for obtaining a charter of incorporation, which would give the graduates a share in the government of the university.

A report which was presented gave at some length a history of the labours of the committee in endeavouring to secure the representative principle for the graduates. Two years had now elapsed since the committee commenced their labours, and the only result had been the obtaining from the senate of the university a reiterated acknowledgment that it was desirable to admit the graduates to a share in the government of the university, accompanied by an indefinite postponement of the consideration of their acknowledged claims. Under those circumstances the committee felt that it had become their duty to call upon the graduates to decide as to the course to be now taken.

Dr. Storror contended that the privilege for which the graduates had been strug-

gling—that of forming a sort of lower house in the government of the University—should long since have been accorded to them. There were, he said, hundreds of men who affixed the mystic letters M.D. to their names who had never undergone an examination in any university, but who had sent over by post to Germany, and had received by post their degree in return for a money-order enclosed. He concluded by moving the following resolution, which was seconded by Mr. G. Jessel, M.A. —

“That the graduates approve of the course pursued by the committee in endeavouring to carry out the principles agreed upon at the last general meeting—viz. that the graduates shall in future form a part of the body corporate of the University; that the government of the University shall consist of a chancellor, a senate, and a convocation, the last to be composed of all graduates of a certain standing; that eventually the senate shall be elected by convocation; that all alterations in the fundamental laws of the University shall require the assent of convocation; that while the general executive management of the University shall be confided to the senate, it shall in certain cases be subject to the veto of convocation.”

A lengthened discussion ensued, and eventually the resolution was agreed to. The second resolution, which was moved by Dr. Quain, and seconded by Dr. F. W. Mackenzie, was virtually a declaration on the part of the medical graduates, that their non-possession of any power or collective voice in the University tends to impair the value of their degrees and to lower their social standing as compared with that of the graduates of the other English universities, and that a change of constitution in that respect was likely to secure for their degrees a higher and more widely-spread reputation. The resolution was adopted. The following resolutions were also passed:—

“That the graduates, while they regret the indisposition of the senate to assist them, pledge themselves to continue their exertions, and to attain their proper position in the University, and authorise the committee to take such steps as they shall judge best calculated;”

And—

“That the committee be instructed to press the claims of the medical graduates upon the Legislature in the event of any changes being contemplated in the existing constitution of the medical profession.”

ROYAL ORTHOPÆDIC HOSPITAL.

On Saturday last the 12th annual general meeting of the promoters of this charity, which was opened in 1838 for the cure of

club-foot and lateral curvature of the spine, was held at the hospital, No. 6, Bloomsbury Square, the Rev. Mr. Wright in the chair. The minutes of the previous meetings having been confirmed, the secretary read the annual report, detailing the result of their operations for the past year. It appeared that the total number of in-patients admitted since January 1849, was 71. Of these 47 were discharged completely cured, and 24 much relieved. 36 are in the hospital at the present time. The average daily attendance of out-patients exceeds 100, the new cases presented weekly from 20 to 40, and the number relieved since the opening amounts to 9,115. The committee had great satisfaction in mentioning that out of this large number not one death had occurred, neither had there been any instance of permanent suffering or injury. They regretted to state that a great number of poor applicants, whose names stand on the books, were waiting admission as in-patients. Many of these had for months past been anxiously looking forward to the period when their cases might be undertaken, all of which were rendered more difficult of cure, and some were in danger of becoming incurable, by the delay. They earnestly trusted that their appeal to the public might be met in such a manner as to furnish the means for a still further extension of the hospital, as the funds at the disposal of the committee were quite inadequate to the relief of the large number of applicants who now came from every part of the kingdom. The receipts for the past year, including a balance in hand of £66, amounted to £1,782. 8s. 5d.; while the expenditure for the same period was £1,621. 8s. 1d., leaving a balance in favour of the society of £161. 0s. 4d. This report was received and ordered to be printed. Mr. Tamplin remarked that the public were likely to be deceived by the fallacious appearance of a balance in their favour, when in fact the hospital was in debt to the amount of £1,123, and he thought that an explanatory statement should be annexed to their balance-sheet, because he had been refused an important subscription on the ground that they had a balance at their bankers. It was eventually determined to refer the question to the consideration of the next quarterly meeting; and some usual routine business having been gone through, the meeting separated, after a vote of thanks to the rev. chairman.

ST. LUKE'S HOSPITAL.

THE annual Court of the Governors of this hospital, which was instituted in the year 1750 "as a further provision for poor lunatics," was recently held at the George and Vulture Tavern, Lombard Street, Mr.

Henry Francis Shaw Lefevre, treasurer, in the chair. The reports of the general committee, auditors, and physicians, were read and approved. It appeared from the report of the general committee for the last year, that in addition to 101 incurable patients permanently maintained and provided for in the hospital, 265 patients deemed curable have been under treatment during the year, of whom, in 167 cases, the treatment was completed, and 118 remained in the hospital on the 1st of January last. Of the above 167 cases 101 were discharged cured, 52 were discharged uncured, and 14 died in the hospital, 4 of whom, out of 12 severe cases, died at the time of the cholera from typhoid fever and cholera. The report stated that on the 13th of June, 1750, nearly 100 years ago, the founders of this charity held their first meeting, and that the hospital was first opened for patients on the 31st of July, 1751. It is proposed to commemorate this event in a fitting manner by celebrating a centenary festival in 1851, and resolutions in accordance with this view were adopted by the Court. Several legacies were announced, amongst others £100 from the late secretary, Mr. Thomas Webster, whose father and himself had held office successively for a period of 99 years. The financial report stated that the income for the year amounted to £8,903. 18s. 8d., £813. 10s. 11d. of which was received from donations, and £4,829. 1s. 5d. from dividends. The expenditure for the year was £6,822. 8s. 6d., of which £3,795. 8s. 6d. was paid for ordinary expenses. The balance remaining in hand amounted to £2,081. 10s. 4d. This statement was agreed to, and the meeting separated, after thanking the chairman.

GENERAL LYING-IN HOSPITAL.

A MEETING of the governors of this institution took place on Monday, at the Hospital, York Road, Lambeth: Mr. T. S. Cocks, M.P., in the chair. The report showed that the expenditure during the last year had exceeded the income to some extent. The receipts arising from dividends and subscriptions amounted to £1515. 4s. 4d. The annual average subscriptions for the last five years had amounted to £360. 14s. The number of patients admitted during the last year were 311 in-patients, and 445 out. The recommendatory letters for patients were 1886. Resolutions to the following effect were then proposed and carried:—That governors and subscribers be at liberty to exchange one in-patient's letter for four out. That every patient, on admission, pay five shillings towards the expense of their washing. That periodical contracts be entered into for obtaining a supply to the hospital of such articles of

consumption as the weekly board shall advise. That the matron shall carefully inspect all the linen of the hospital every six months, and present to the weekly board a statement of the condition and quality of the same; and that an application be made to the metropolitan clergymen to preach an occasional sermon in aid of the funds. After some discussion relative to the resolution of obliging the in-patients to pay five shillings towards their washing, it was ultimately arranged that two shillings and sixpence should be substituted. A vote of thanks was then accorded to the chairman and sub-committee, and the meeting separated.

Selections from Journals.

ABSTRACT OF THE ANALYSIS OF A NEW SUBSTANCE OCCURRING IN THE URINE OF A PATIENT WITH MOLLITIES OSSIUM. BY HENRY BENEC JONES, M.D. F.R.S., PHYSICIAN TO ST. GEORGE'S HOSPITAL.

THE urine was passed by a grocer, forty-seven years of age, who had been out of health for thirteen months.

The specimen of urine was slightly acid; specific gravity 1084.2; it contained a sediment consisting of crystallized phosphate of lime, oxalate of lime, and cylinders of fibrine. The urine became thick with heat, but became clear on the addition of a drop of acid. It gave no precipitate with an excess of nitric acid, unless left to stand, or unless heated and then cooled, when it became solid. This solid was liquefied by heat, and was again produced on cooling. Continued boiling with strong nitric acid evolved but little gas, and did not quickly hinder this reaction. Hydrochloric acid gave the same solid precipitate, soluble by heat. Strong acetic acid gave only a slight precipitate, which was redissolved by heat. Caustic potash and sulphate of copper gave a splendid bright blue, clear liquid, passing, when heated, to claret colour. 516.84 grains evaporated to dryness *in vacuo* over sulphuric acid, gave 48.37 grains solid residue = 93.68 per 1000 urine.

The urine was examined at various periods, and differed in coagulability, owing either to a variation in the degree of acidity, or to variations in the composition of the new substance.

The ultimate analysis of the new substance may be represented by $C_{48}H_{88}N_8O_{18}$; or by $C_{40}H_{72}N_8O_{14}$ according as protein is $C_{48}H_{88}N_8O_{18}$; or $C_{40}H_{72}N_8O_{14}$.

Carbonate	52.10	..	52.00
Hydrogen	6.70	..	6.85
Nitrogen	15.17	..	15.15
Oxygen	26.00	..	25.99

Sulphur . . 1.36 1.09 = 1.08 per cent.
Phosphorus — .19 = .19 per cent.

Hence it is an oxide of albumen, and from the ultimate analysis it is the hydrated deutoxide of albumen.

The bones of the patient after death exhibited the changes indicative of the existence of *mollities ossium*. During life 66.97 parts of this hydrated deutoxide of albumen were passing out of the body in every 1000 parts of the urine; as much as there is of ordinary albumen in healthy blood. So that an ounce of urine was equal to an ounce of blood lost.—*Philosophical Transactions*. X

VAGUENESS IN DIRECTIONS FOR THE ADMINISTRATION OF REMEDIES.

PHYSICIANS cannot be too explicit in giving directions for the administration of remedies. The most serious consequences occasionally result from this source. We have known liniment containing large quantities of ammonia swallowed; and in one instance, a pint of a most nauseous mixture, intended for an enema. In conversation with Prof. Mussey, on a recent occasion, he remarked that a New England friend of his was remarkable for his indefiniteness. Thus, he would say, "Take this medicine, put it into some water, and take three or four spoonfuls four or five times a day." How much medicine the patient would get in a given time seemed very doubtful.

The following note, written by one physician to another, recently fell under our notice:—

"Dr. — : Sir,—You are under obligations to me for seeing your Third street negro, to whom I gave some calomel and ipecac., and some other things, every now and then."

This subject was called to my mind by the directions for the use of "Ayer's Cherry Pectoral," which runs thus—"Fifteen to fifty drops, *pro re nata*." Which means, we suppose, fifteen to fifty drops "*every now and then*." Carried into practice it would run about thus—"fifteen to fifty drops put into *some* water, and three or four spoonfuls four or five times a day, more or less, according to circumstances!"

We often require the attendants to repeat our directions before we leave; and in a majority of cases, where there is the least complexity in the rules to be observed, it will be found that some important portion has been forgotten.—*Western Lancet*.

UNIVERSITY COLLEGE, LONDON.—ANNUAL MEETING.

YESTERDAY afternoon the annual general meeting of the proprietors, donors, and fellows of this institution, was held in the council-room of the college. Mr. Warburton presided, and was supported by Baron de Goldsmid, Mr. J. Taylor, F.R.S., Mr. T. Gibson, Dr. Hutton, Dr. Mackenzie, Mr. R. Taylor, Mr. Robinson, Alderman Hunter, and several other gentlemen.

The Report, which was read by the Secretary, stated that the number of students in the faculty of medicine was 284, faculty of arts 281, and in the junior school 285: making a total of 850. Compared with the previous year, the number in the faculty of medicine was less by 31, in the faculty of arts more by 29, and in the junior school less by 25. The amount of fees received was £13,472,—namely, from the medical faculty, £4964; from the faculty of arts, £4108; and from the junior school, £4329. The share of the professors and masters, exclusive of annual augmentations, amounted to £9106, while the college portion was £2951. The sum of £1343. 18s. had been received from the students in attendance at hospital practice, and contributed towards the support of the charity. The entries for the current session up to the present time were 236 medical students, of whom 50 entered for the first time at the commencement of the session. The school of analytical chemistry contained 27 students. The number in the junior school was at present 236; at the corresponding period of last year it was 253. The expenses of the college amounted to £11,142. 8s. 4d., of which £7076. 4s. was for building, and £3400. 6s. 6d. for ordinary expenses.

UNIVERSITY COLLEGE HOSPITAL.—MEDICAL APPOINTMENT.

At a Session of the Council of University College on Saturday last, Dr. Hare, Senior Physician to the St. Marylebone General Dispensary, was appointed Assistant-Physician to University College Hospital.

BOOKS & PERIODICALS RECEIVED FOR REVIEW.

(The List will be given in our next No.)

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Feb. 23.

BIRTHS.		DEATHS.	
Males....	781	Males....	467
Females..	753	Females..	444
	1536		911

CAUSES OF DEATH.

ALL CAUSES	921
SPECIFIED CAUSES	906
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	169
Sporadic Diseases, viz.—	
2. Dropsy, Cancer, &c.	57
3. Brain, Spinal Marrow, Nerves, and Senses	111
4. Heart and Bloodvessels	50
5. Lungs and organs of Respiration	167
6. Stomach, Liver, &c.	49
7. Diseases of the Kidneys, &c.	14
8. Childbirth, Diseases of Uterus, &c.	8
9. Rheumatism, Diseases of Bones, Joints, &c.	6
10. Skin	1
11. Old Age	45
12. Sudden Deaths	22
13. Violence, Privation, Cold, &c....	28

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	9	Convulsions.....	41
Measles.....	24	Bronchitis.....	79
Scarlatina.....	11	Pneumonia.....	51
Whooping-cough.....	36	Phthisis.....	94
Diarrhoea.....	21	Lungs.....	11
Cholera.....	0	Teething.....	12
Typhus.....	33	Stomach.....	7
Dropsy.....	12	Liver.....	8
Hydrocephalus.....	25	Childbirth.....	4
Apoplexy.....	22	Uterus.....	3
Paralysis.....	16		

REMARKS.—The total number of deaths was 156 below the average number of deaths in the eighth week of ten previous years. [In our last summary, for *tenth*, read *seventh* week.]

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer	29.67
" " " Thermometer.....	47.2
Self-registering do.	Max. 0° Min. 30°
* From 12 observations daily. * Sun.	

RAIN, in inches, '19.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 9° 2 above the mean of the month.

NOTICES TO CORRESPONDENTS.

The note forwarded to us from a correspondent at Carlisle shall receive our attention. The subject of bribery, as applied to medical referees, has been already noticed in this journal.

We have to thank our Indian correspondent, Mr. Assistant-Surgeon Moore, of Lullutpoor, for the concluding papers on Indian Village Cholera. We shall shortly commence the publication of these valuable documents.

A Subscriber, Boston.—We find, by the Medical Directory, that Mr. Wiblin, surgeon, of Southamptou, has published a Medical Student's Guide to the Hospitals of Southampton.

Inquirer.—It is a serious omission in the Medical Directory that there is no summary of the M.R.C.S. and L.S.A.'s London and Provincial. Hence it is impossible to say how many there are who possess the two diplomas or either diploma separately. We believe that the number of Members of the College of Surgeons is grossly exaggerated.

The papers of Dr. Williams, and Mr. Moore (Birmingham), in our next.

Lectures.

LECTURES

ON

LACTATION, AND THE DISORDERS
INCIDENT TO THE PUERPERAL
STATE.

By E. W. MURPHY, M.D.

Professor of Midwifery, &c. in University
College, London.

LECTURE XV.

Phlegmasia dolens—History of the disease—Its cause—Adhesive inflammation of the crural and pelvic veins—Symptoms—Terminations—Treatment: depletion, mercury, opium, antimony, purgatives, blisters, tonics, diuretics, bandaging the limb—Pathological appearances described by Lawrence and Davis—by R. Lee—Conclusions derived as to the nature of the disease—Phlebitis presents three forms: the adhesive (*phlegmasia dolens*), the circumscribed suppurative, the diffused suppurative inflammation.

POST-PARTUM FEVERS.—Milk fever or weed—symptoms and treatment—The gastro-bilious or intestinal fever—causes—symptoms—treatment—The miliary fever—description—the cause producing it—White's account of the management of the parturient woman in his time.

GENTLEMEN,—“*Phlegmasia alba dolens*” is the popular name given to another form of inflammation that was quite unknown until the last few years. It received this name because the leading feature of the disease was a general swelling of the leg, which became greatly enlarged, hard, white, and painful. Its true cause was a mystery, and therefore the profession, as in all other instances, indulged very freely in hypotheses. The oldest and most popular belief was founded on the doctrine of metastasis. Mauriceau supposed that it was owing to a reflux upon the lower extremities of certain matters, which should have been evacuated by the lochia. Puzos, Levret, and several others, thought that it was a metastasis of the milk from the breast to the leg, “*dépôts du lait*,” “*metastasis lactis*,” and this very simple and convenient explanation seems to have held its ground with the profession to a latter period than we might suppose. Dr. R. Lee mentions a case in which, not many years ago, “a celebrated London accoucheur was so strongly impressed with a belief of the truth of the doctrine of milky deposits in crural phle-

XLV.—1162. March 8, 1850.

bitis, that he ordered the infant to be kept night and day at the breasts, lest the milk should make its way to the thigh.” Even then, however, the more scientific part of the profession discarded this explanation, and sought for it among the parts directly affected. In 1784, Mr. White, of Manchester, adopted the opinion that the disease depended upon obstruction or some other morbid condition of the lymphatics. Mr. Trye, of Gloucester, supposed that they were ruptured: Dr. Ferriar, that they were inflamed. In 1800, Dr. Hull doubted this doctrine, as inadequate to explain the facts. He considered that the bloodvessels were also engaged, and supposed that its proximate cause consisted in an inflammatory affection, by which serum and lymph were effused abundantly into the cellular tissue, thus producing the swelled leg; and that “all the textures, muscles, cellular membranes, lymphatics, nerves, glands, and bloodvessels become affected.”* Thus far the explanations as to the nature of the disease were little more than guess-work, each suggestion being adopted according as it best suited the leading symptoms observed; no inquiry was made into its pathology, nor any examination made of the morbid alterations caused by the disease, until 1817, when my late respected predecessor, Dr. Davis, first pointed out its true character. A patient of his died of *phlegmasia dolens*: he obtained the assistance of Mr. Lawrence, and made a most careful examination of the limb after death. Mr. Lawrence thus described the morbid appearances:—“The femoral vein, from the ham upwards, the external iliac, the common iliac veins as far as the junction of the latter with the corresponding trunk of the right side, were distended and firmly plugged with what appeared a coagulum of blood. The femoral portion of the vein, slightly thickened in its coats, and of a deep red colour, was filled with a firm bloody coagulum, adhering to the sides of the tube, so that it could not be drawn out. The trunk of the profunda was distended in the same way as that of the femoral veins; but the saphena and its branches were empty and healthy. The substance filling the external iliac and common iliac portions of the vein was like the laminated coagulum of an aneurismal sac,—at least with a very slight admixture of red particles; the tube was completely obstructed by this matter more intimately connected to its surface than in the femoral vein,—adhering, indeed, as firmly as the coagulum does to any part of an old aneurismal sac; but in its centre there was a cavity containing about a teaspoonful of a

* Lee on Diseases of Women, p. 148.

thick fluid, of the consistence of pus, of a lightish brown tint, and pulaceous appearance. The uterus, which had contracted to the usual degree at such a distance of time from the delivery, its appendages and bloodvessels, and the vagina, were in a perfectly natural state. There was not the least appearance of vascular congestion about the organ, nor the slightest distension of any of its vessels. Its whole substance was, on the contrary, pale, and the vessels everywhere contracted and empty."*

We have detailed the substance of this dissection rather at length, because it embraces all the leading characters of the disease, and determines the time that its nature was first understood. Six years afterwards (May 1823) Dr. Davis brought forward a paper on the subject in the Medico-Chirurgical Society; and just previously (Jan. 1823) M. Bouillaud related several cases and dissections, in which the crural veins were obliterated.† Thus, it was established that phlegmasia dolens was inflammation of the crural veins. Dr. Robert Lee went a step further, and endeavoured to connect this inflammation with the uterus; that it was, in fact, an extension of inflammation from the uterine veins to those trunks in immediate connection with them: a paper on this subject was published in the Medico-Chirurgical Transactions in 1829.

From this history it is evident that this disease must be considered as a form of venous inflammation, which may be taken in connection with that which we have just considered. The former inflammation was acute, this is more chronic in its character. Chronic inflammation of the veins in connection with the uterus might be an appropriate title; but as I am anxious to avoid terms that involve a doubt, I shall adhere to the old and popular name, phlegmasia dolens.

This disease occurs at a later period than inflammation of the uterine veins: it is observed on the twelfth day after delivery, and sometimes as late as the twentieth. Like inflammation of the sub-peritoneal tissue, it is frequently consequent upon some preceding inflammation. The causes that produce it are also similar.

The symptoms which it presents are, generally, a rigor, more or less distinct, some headache and nausea, with a quick small pulse; the patient is irritable and anxious: she soon complains of pain and uneasiness about the pelvis; she is restless, but cannot move without pain: she describes it as extending from the groin down the thigh and leg, or perhaps she may be seized with

a violent cramp-like pain in the calf of the leg, or in the muscles of the hip. The inguinal region is soon observed to become tumid, and the swelling to extend down the thigh and leg, so that in a day or two the whole limb is greatly enlarged, tense, shining, and elastic; the pain then diminishes, but the limb is immovable. In some instances the swelling begins from below, in the ham or the calf of the leg, or the ankle, and extends upwards. Although the patient is comparatively free from pain, yet it is soon excited if the lymphatic glands or venous trunks are compressed; sometimes, also, red lines, and occasionally a blush of erythema, may be observed taking the course of the lymphatics. The veins feel hard and knotted, like whip-cord, are painful when pressed, and roll from the finger. The temperature of the limb is increased. The lymphatic glands are swollen, hard, and painful; they have been observed sometimes to suppurate. The constitution manifests a considerable amount of irritation; the pulse rises often to 140, small, quick, and occasionally feeble; the tongue is white; the countenance pallid; there is great thirst, with some degree of nausea: the lochial discharge, and the secretion of milk, are generally arrested. The patient gets very little sleep; she spends a restless night, and in the morning is often bathed in a profuse perspiration. This stage of the attack will last sometimes ten days or fortnight, when the constitutional symptoms gradually disappear; the pulse falls by degrees to its natural standard; the tongue becomes clean; the milk returns; and the patient gets refreshing sleep. The swelling in the limb diminishes, so that it is no longer so elastic, but pits on pressure; the tenderness of the veins and lymphatics have disappeared; the proper size of the limb is nearly restored, but not its power. The patient has but little control over it, she moves it with great difficulty, and she may remain lame even for months after the attack. One limb only is, most usually, affected. In some rare cases both limbs have been simultaneously engaged, but it more frequently happens that one leg, generally the left, is first attacked; the disease then leaves it and seizes upon the right.

This inflammation is not usually fatal: it may terminate in simple resolution, or may leave behind some thickening of the cellular tissue, or a varicose state of the veins; the swelling of the limb does not, therefore, completely subside, and the patient continues lame. Suppuration very rarely occurs, but when it takes place it greatly increases the danger of the case. It has happened that large collections of pus formed in the pelvis, and the patient

* Davis's Obstetric Medicine, p. 908.

† Archives de Médecine, Tome ii. Jan. 1823.

died of hectic fever. Death also takes place suddenly in some instances: cases are related where a sudden change of position—sitting up in bed—caused death.

The treatment must be governed by the effect produced by the attack on the constitution. If the patient be plethoric, the pulse firm, and but little constitutional irritability present, depletion may be employed with more boldness, but even here local depletion is always to be preferred: thirty or forty leeches applied directly over the veins and lymphatic glands will sometimes cut short the attack. If the constitution, however, be much under its influence, and the symptoms of its irritation be prominent, depletion must be used with great caution; eight or ten leeches applied in the same situation, and repeated from time to time, is much safer than a larger number applied at once. It is better, also, not to adopt the practice of encouraging the bleeding afterwards; or, in other words, by means of fomentations establishing a drain from the bleeding vessels: a constant trickling of blood produced in this way often causes greater depression than a large quantity of blood taken at once: if, therefore, we fear a large depletion, lest it might be followed by such an effect, we must take care to avoid producing it in a different manner. *Mercury* is a medicine of great value in this form of inflammation, not carried to the extent of salivation, but merely to affect the gums slightly. If persevered in too far, the powers of the constitution sink under it, and the medicine acts rather as poison, but if moderately used it is highly beneficial. *Opium* should be combined with it, and the proportion of opium increased just as the constitution gives evidence of irritability. In this, as in all other instances where exhaustion and consequent irritability of the nervous system is present, opium is invaluable. In this disease both medicines may be given in moderate proportions. *Antimony* is sometimes exhibited with advantage. In plethoric habits, where a large depletion is indicated, but with whom, nevertheless, it is not desirable to diminish much the quantity of blood that is circulating, tartar emetic may be administered, either in nauseating doses, or in combination with saline aperients. In feeble constitutions antimonial powder may be substituted. *Purgatives* should be given with caution. The state of the bowels is very variable: sometimes they are constipated; in other instances the patient is attacked with diarrhoea; the evacuations, also, are frequently very offensive: purgatives are, of course, only indicated when the former condition exists, but even here it is better to relieve the bowels by warm emollient enemata

than by active cathartics. Avoid every source of irritation in the immediate neighbourhood of so serious an inflammation: an active catharsis may rekindle an inflammation which was about to subside. Locally, besides depletion, counter-irritation has been found very serviceable. Mr. Sankey* has found *blisters*, applied over the most painful part, and repeated every two or three days, of great use. *Turpentine* fomentations have also been employed with great advantage. During this stage the diet should be mild and unirritating; a milk diet, sago, arrow-root, tea and toast, with barley water if there be any thirst: a diet of this character may be selected according to the taste of the patient. In the second stage, when the inflammation begins to subside, the tenderness to diminish, and the limb to pit on pressure, a more nutritious diet is required. *Tonic*s are also indicated, and quinine, with sulphuric acid, may be given freely in any bitter infusion. In order to reduce the size of the limb, and to promote absorption, frictions and bandaging are extremely useful: it may be rubbed with soap liniment, or the mercurial ointment diluted, and a bandage carefully applied from the toe upwards. When the inflammation is on its decline, this is easily effected: in fact, the absorption may be too rapid, and the venous circulation loaded with more than it can dispose of: to relieve this, and to promote an equally rapid excretion, it is necessary to excite the action of the kidneys, and therefore diuretics are essential while absorption is going forward. The bandage should be retained for some time after the size of the limb has been reduced, because it is necessary to recollect that the principal trunks that convey the blood returning to the heart are obstructed: and hence the anastomosing veins are over-distended in the effort to supply their place: the superficial veins become varicose, and, if not supported, may remain so permanently. By these means venous inflammation of this character may generally be subdued. It has happened, however, in spite of the best directed treatment, that phlegmesia dolens has been fatal. Death has taken place quite suddenly in some instances, even when there was a favourable prospect of the patient's recovery. In other cases the blood evidently became poisoned: the inflammation was diffused, collections of pus were found in distant parts, and the patient died with the symptoms of toxicæmic phlebitis.

The pathological appearances of phlegmesia dolens have been very accurately described by Mr. Lawrence, in the first dissec-

* Edinburgh Journal, vol. x. p. 403.

tion that was made to investigate this disease. Subsequent post-mortem examinations proved the same facts, and showed that the femoral, the iliac veins, and their branches, and sometimes even the inferior cava, had been the seat of inflammation. Mr. Lawrence, however, found the uterus of its natural size; "its appendages and bloodvessels, and the vagina, were in a perfectly natural state. There was not the least appearance of vascular congestion about the organ, nor the slightest distension of any of its vessels. Its whole substance was, on the contrary, pale, and the vessels everywhere contracted and empty." From this account it would seem as if this form of inflammation was quite independent of any inflammation in the uterus. Judging, perhaps, from the fact that phlegmasia dolens is frequently observed as a sequence of uterine inflammation, Dr. R. Lee took every opportunity of investigating this point, and has related dissections that appear to prove a connection between them. He has traced the results of inflammation along the hypogastric and uterine veins, as far as the uterine plexus of veins. In one case he observes—"The left hypogastric or internal iliac vein was in the same condition, but in some places reduced to a cord-like substance, and its cavity throughout completely obliterated. The branches of this vein taking their origin in the uterus, and usually termed the uterine plexus, were found completely plugged up with firm reddish coagula of lymph. From the commencement of the branches of this plexus of the hypogastric vein to the termination of this vein in the iliac, the whole had become thickened, contracted, and plugged up with coagula, and adventitious membranes of a dark blue colour. The same changes had taken place in the uterine plexus and trunk of the right hypogastric vein, from the uterus to its unusual termination in the left common iliac vein."* These dissections seem to prove the connection between inflammation of the pelvic veins and that of the uterus, as cause and effect; but still it is open to a doubt that it is generally true. First, because other observers who have related dissections, do not mention that the veins in the immediate neighbourhood of the uterus were affected. It may be, as Dr. Lee supposes, that they were not looked for, and had escaped their notice; but we do not think that this case applies to the first very accurate dissection made by Mr. Lawrence, who had evidently sought in the uterus for the cause of inflammation, and found none. Secondly, the varicose state of the veins of the leg that often occurs, and the frequency of hemorrhoids

during pregnancy, prove that the pelvic veins must be equally liable to dilatation below the point of compression. It is not likely that this varicose condition should be confined to merely terminal branches. If the pelvic veins become varicose during pregnancy, they are in a morbid condition: their coats, at least the outer cellular coat, is thickened, and it is probable that the surrounding cellular tissue is also altered and indurated: they are thus in a state more susceptible to inflammation than the healthy vein would be, and hence a slighter cause would produce such an effect. Thirdly, the morbid change produced in a varicose vein by inflammation is precisely what is observed in phlegmasia dolens. Adhesive lymph is poured out; the blood is coagulated, and thus the inflammation is prevented from extending itself. The contrary may certainly take place; suppuration may overcome this effort, pus may poison the blood, and the patient die with the symptoms of acute phlebitis (Dr. R. Lee relates such cases); but they are clearly exceptions to a general rule. The ordinary course which phlegmasia dolens pursues is precisely that of an inflamed varicose vein. It may be objected to this view, that phlegmasia dolens may occur in cases where neither the veins of the leg nor the hemorrhoidal veins are varicose; and secondly, phlegmasia dolens never occurs during pregnancy, nor for some time after delivery. With regard to the first objection, we would reply, that the condition of the terminal veins is no proof of the state in which the leading trunks may be in the pelvis. When blood accumulates in the veins, they are not all equally distended; some yield and become varicose, others do not: this may be observed in the veins of the leg: in one case the saphena and its branches are varicose, while the other trunks and terminal veins are unaffected. In other instances these latter vessels are dilated, and render the leg almost black, while the saphena is but little affected. Thus, the very fact that the veins of the extremities sometimes have sufficient power to resist distension, may be a reason why the pelvic veins become ovaries, and if so, diseased. The late period in which phlegmasia dolens appears is certainly a difficulty, and it was this objection that led Dr. Lee to assign phlegmasia dolens as a sequence of a pre-existing inflammation in the uterine veins; but a little reflection may perhaps satisfy you that the objection is more apparent than real. Pregnancy is not the time for inflammations of any kind, excepting what may occur in the uterus itself, and even that is of a chronic or subacute character: the determination of blood towards the uterus seems to prevent its accumulation in

* Lee's Lectures, p. 555.

any other direction: hence it is quite possible that the pelvic veins, during pregnancy, may undergo those morbid changes of structure dependent upon their over-distention, without actually becoming inflamed. They may be highly susceptible to inflammation, and yet not manifest that susceptibility until the period of pregnancy has passed. With regard to the time that it appears after delivery, phlegmasia dolens seems to follow the law that the more chronic or subacute post-partum inflammations observe in this respect. Inflammation of the sub-peritoneal tissue often possesses this character, and presents itself at an equally late period: so that acute inflammations, whether of the mucous membrane, or fibrous structure, or the serous surface, are always observed soon after parturition: the more chronic forms mark a longer interval. Phlegmasia dolens, however, sometimes manifests its symptoms as early as the fourth day after labour.

The conclusions, then, to which we have arrived as to the nature of phlegmasia dolens, are—First, that it is essentially an inflammation of veins that have previously become varicose, and have undergone those morbid alterations in their coats and surrounding structures that is so frequently observed in varicose veins. Secondly, that the tendency of this inflammation being to limit itself and become circumscribed, it may be confined to the iliac veins alone, or may extend downwards to their minute branches, or along the crural trunks. It may pass upwards by the inferior cava, a short distance, but seldom passes the emulgent vein. In all these instances the boundary of the inflamed veins is clearly marked. Thus the inferior cava may be engaged, and the emulgent veins perfectly free; the crural or saphena may be inflamed, and the profunda free; and even the uterine branches of the hypogastric vein may be involved in the inflammation, and yet the uterine veins themselves totally escape. Thirdly, the exciting causes of the inflammation may be accidental,—as sudden exposure to the cold, and such like; these will produce inflammation very readily in a structure morbidly susceptible to its influence. So, also, an antecedent inflammation may be an exciting cause, and in this sense inflammation of the uterus or vagina may produce phlegmasia dolens. Fourthly, this inflammation may deviate from its proper course; the effusion of lymph and the coagulation of blood may not prevent the diffusion of pus into the general circulation, and thus phlegmasia dolens may assume the characters, and be followed by the same fatal result, as acute phlebitis; but these cases are exceptions. Phlegmasia dolens does not do so in the majority of instances, nor is it generally a fatal disease.

We have now considered two forms of venous inflammation,—the one acute, the other chronic; the uterine veins are the seat of acute phlebitis: the venous trunks in the neighbourhood of the uterus are chiefly affected in phlegmasia dolens: the former occurs less frequently than the latter. True inflammation of the uterine veins is comparatively rare. Toxicæmic inflammation, that which is produced under the influence of morbid poisons, is perhaps the most frequent form. It is, however, necessary that we should distinguish one from the other, because it appears to us that much confusion has arisen from including under one name, and the same description, simple inflammation, and that which is the result of the absorption of poison. The former follows the same course as is observed in venous inflammations that are caused by wounds and other injuries. The latter is only one effect of a destructive element that is by no means confined to the uterine veins. The morbid appearances that accompany phlegmasia dolens well exhibit the conservative power that an inflamed vein possesses of preventing the mischief that otherwise must follow. Pus, the product of this inflammation, in a certain sense, acts as a poison if it be mixed with blood. It may be carried into the general circulation, and if so, it renders the blood impure. If pus accumulate in the blood, its irritation excites inflammation in the vein that conveys it: a small quantity of pus may be carried rapidly along a vein without having such an effect, but if its progress be retarded, as in the capillary circulation, it will excite inflammation in the vessels where its progress is arrested. The curative object of Nature in phlebitis is to circumscribe the inflammation, and to prevent the diffusion of pus: this is generally successfully accomplished in phlegmasia dolens,—first by the rapid effusion of lymph from the sides of the inflamed vein by which the impure blood is confined; and secondly, by the coagulation of the blood itself, which is always the first effect of its admixture with pus. This is successful in phlegmasia dolens, because the inflammation is subacute, and its progress, comparatively with other forms, slower. This form of phlebitis seldom exceeds the adhesive stage: the inflamed vein is blocked up with adherent coagula and cut off from the general circulation. If the inflammation subside, the vasa vasorum either remove the plug by absorption, and again open the vein, or obliterate by the same means the vein itself. Thus, in the post-mortem inspections of phlegmasia dolens, you will find sometimes the affected veins filled with these plugs, sometimes having a small central canal, or the vein is obliterated to a mere thread.

In the more acute form of venous inflammation this protective process is seldom so complete: on the contrary, some pus usually makes its way into the general circulation, and its quantity, as well as the effect which it produces, depends very much upon the strength of the patient's constitution. If the vital powers are active, the pus,—the peccant humour of the older nosologists,—is again circumscribed in some distant vein or veins, makes its way to the surface in the form of abscess, and is thus removed from the blood. Hence these abscesses are commonly critical. If the constitution cannot accomplish this purpose, pus becomes more abundant, excites æsthenic inflammation, to a greater or less extent, in the several veins through which it passes; and, in fact, exerts the same destructive action as a morbid poison. We may, therefore, consider these inflammations in three degrees of severity. The first is the adhesive inflammation, which is observed in phlegmasia dolens; the second is the circumscribed puriform inflammation, which is occasionally met with in acute uterine phlebitis; the third is the diffuse puriform inflammation, which may occur at any time in a debilitated constitution, but which is always the result of the absorption of morbid poisons. The first form is seldom fatal, and when so it is because it merges into the second or third variety. The second is much more dangerous; nevertheless, by proper treatment, the patient may be saved from it, unless it degenerate into the third form, which is always fatal.

We have stated to you that true uterine phlebitis is comparatively a rare disease. This will be intelligible to you when you reflect on the structure of the uterine veins. The lining membrane of a vein, although highly irritable, is the last to inflame. To adopt the language of Hæase, "the internal membrane of the veins reacts, indeed, upon the application of irritant substances almost as quickly and intensely as the serous membranes. In this respect, doubtless, the vascular substratum plays the principal part, *the lining membrane yielding merely to the alternations of endoemose and exoemose, and not suffering any organic change until a later period.* In this respect it will appear not unworthy of notice that those portions of the venous system which are composed exclusively of the internal membrane of veins, with a very scanty provision of surrounding cellular tissue, like the corpora spongiosa, are very rarely, and never extensively, the seat of true inflammation."^{*} The uterine veins are just like the corpora spongiosa; they consist only of a single lining membrane,

closely surrounded by the uterine fibres, through which it is difficult to trace any cellular tissue. They are, therefore, in that condition which would render them least susceptible to true inflammation. This fact may also be viewed as an admirable provision of Nature to save the parturient woman from consequences which otherwise would inevitably follow. Bear in mind Cruveilhier's comparison of the uterine cavity to an open wound, having the mouths of these veins exposed. If inflammation were readily excited, few women would escape its most serious result; and thus parturition itself might be viewed as only the commencement of a disease of the most dangerous character, the uterine veins at once inflaming when exposed to the air, and other causes of irritation. This, however, is not the case; the admission of air has no effect upon them. They may be quite insensible to the contact of even putrid matter; such, for instance, as a putrid ovum or a putrid placenta. The rough manipulation that is frequently adopted in delivering the child, or in extracting the placenta, does not generally excite them to inflammation. On the contrary, when inflammation is so produced, it generally begins in the fibrous structure, and extends to the veins. In certain instances it is probable that the uterine veins are only the medium of communicating an irritant to act on the veins in immediate relation to them, without these vessels being influenced by it. Dr. R. Lee's view of phlegmasia dolens may be, therefore, in some cases, quite correct. There are certain conditions, also, in which this protective power is altogether lost. There are certain states of the constitution in which any, the most trifling of these causes, is sure to excite the worst form of phlebitis. We shall enter upon their consideration when speaking of puerperal fever. At present we are only desirous of guarding you against an error that we fear is too prevalent with regard to phlebitis,—that is, the mistake of confounding very opposite varieties of inflammation in one classification.

POST-PARTUM FEVERS were as frequently met with some years ago as the inflammations we have been considering. The ephemeral fever, the gastro-bilious or intestinal fever, and the miliary fever, received as prominent a place in the descriptions of the older authors as the puerperal fever. At present, however, the last fever seems to have absorbed all the rest. The ephemeral and gastric fevers are described as occasional accidents; the miliary fever is only an historical event; and puerperal fever alone occupies the attention of obstetric authors. This may be readily explained; and the fact affords a strong evi-

* Hæase's Pathological Anatomy, p. 11.

dence of the improvement in obstetric practice. The former fevers were generally the result of mismanagement. Indiscretion in diet, neglect of the bowels, or improper exposure to cold draughts of air, where the patient was kept in a high temperature, induced ephemeral fever at the time that the milk was forming in the breast. When no attention was given to the state of the bowels, and they became torpid, the irritation was communicated to the whole gastro-intestinal mucous tract, which did not manifest itself until the period of reaction after delivery. Gastro-intestinal fever then was developed. And lastly, when the rule was on no account to allow the patient to chill after delivery, but to avert it by warm stimulating drinks, by hot fires, heaped-up bed-clothes, and close apartments, the miliary fever showed itself, and sometimes followed a very dangerous, if not a fatal course. Happily this fever has disappeared with the removal of its cause; and both the others are met with far less frequently now than they had been formerly. A very brief description will, therefore, be sufficient to dispose of them.

The ephemeral fever occurs just as the breasts are becoming distended with milk. It commences with a rigor sometimes extremely severe. I have seen it like an ague fit. This, however, is soon succeeded by a hot stage. The patient is thrown into a profuse perspiration, in which she frequently falls off asleep; the fever subsides, and she has no further return of it. The secretion of milk is not usually arrested; and if not, the application of the child to the breast when the paroxysm is passing off is the most efficient febrifuge you can employ. In other respects, it is better to let the fever take its course, only avoiding such accidental causes as may alter its character. Thus, in the cold stage, warm drinks and warm covering are necessary; while in the hot stage it is equally essential to reduce cautiously her temperature. If improper food had been taken just previously, an emetic would be advisable; and, on the same principle, an aperient may be given, in order to remove from the bowels any cause of irritation that may exist. Little else is required, unless the patient is more than usually prostrated by the attack. In such cases it may be necessary to give tonics after it has passed away.

The gastro-bilious or intestinal fever seems like the preceding fever, only that it is protracted. It commences nearly in the same manner, but does not pass off so quickly. When the paroxysm subsides, the patient still complains of nausea: she loathes food; the pulse continues frequent; the skin is hot, although the patient may feel cold; the tongue is white and slimy,

and she has great thirst. The intestines are generally distended with flatus; and, consequently, she experiences frequent griping pains in the bowels. The evacuations are usually dark and very offensive. The secretion of milk is scanty, but not altogether suppressed, neither is the lochial discharge generally interfered with. The patient rests badly, and is often tormented with night-mare; but, in some instances, the amount of nervous irritation is most distressing, the patient starting constantly from her sleep, and when awake attacked with palpitations. The abdomen is sometimes very much distended by flatus; and when this is the case, if care be not used, it may continue permanently enlarged. Thus some women after delivery are nearly as large as they were before it. This fever lasts about a week, but may extend to a fortnight, or even to three weeks.

The treatment must be directed to alter and improve the secretions from the bowels, without acting too violently upon them. For this purpose hyd. c. cretas, soda exsiccata, and Dover's powder, may be combined, and given in small but repeated doses. An aperient may be administered on alternate days. A draught of infusion of rhubarb with magnesia, or the powdered rhubarb with sulphate of potass, in any of the aromatic waters, will be found useful. Diaphoretics are also serviceable in exciting the capillaries of the surface. When the patient is much distressed from tormina, turpentine may be given with advantage. Two drachms of castor oil, and the same of turpentine, in mint water, often gives immediate relief; or, if the irritability of the stomach will not admit of this, an enema of turpentine with asafoetida will answer the purpose. When the fever subsides, and the patient is recovering, it will be necessary to restore, as far as possible, the tone of the intestines. Astringents, tonics, and wine, are indicated. The infusion of quassia, with the tincture of myrrh and vinum ferri, forms a good combination; or the compound myrrh pill, with sulphate of iron. Attention should also be paid to the state of the abdomen. It should be again enclosed in a broad flannel bandage until it has in some degree recovered its contractile power.

The miliary fever was ushered in by very unfavourable symptoms; great anxiety, oppression at the precordia, sighing, and dejection of spirits. These were accompanied by quick pulse, white tongue, thirst, and other febrile symptoms, of which the most characteristic was profuse and irregular perspirations that were not critical, and were followed by a great amount of depression. An eruption then appeared, of a vesicular character, sometimes having an in-

flamed base, which was called the red eruption, sometimes without any. A number of pearl-coloured vesicles appeared about the upper part of the body, which was called the white eruption. These presented themselves with the sweats, continued for a day or two, and then faded away, perhaps to return again. The time of its appearance was variable. Some perceived it as early as the fifth day; some on the seventh; others on the tenth; and others, again, as late even as the sixteenth and twenty-eighth days. The earlier it appeared, and the more abundant the crop, the greater was the danger to the patient.

The cause of the disease may be learned from the following graphic description of the management of a woman in labour, as given by Mr. White:—"When a woman is in labour she is often attended by a number of her friends in a small room, with a large fire, which, together with her own pains, throw her into profuse sweats. By the heat of the chamber, and the breath of so many people, the whole air is rendered foul, and unfit for respiration. . . . If the woman's pains be not strong enough, her friends are generally pouring into her large quantities of strong liquors mixed with warm water; and, if her pains be very strong, the same kind of remedy is made use of to support her. As soon as she is delivered, if she be a person in affluent circumstances, she is covered up close in bed with additional clothes, the curtains are drawn round the bed and pinned together, every crevice in the windows and door is stopped close, not excepting even the key-hole, the windows are guarded not only with shutters and curtains, but even with blankets, the more effectually to exclude the fresh air, and the good woman is not suffered to put her arm, or even her nose, out of bed, for fear of catching cold. She is constantly supplied out of the spout of a tea-pot with large quantities of warm liquors, to keep up perspiration and sweat, and her whole diet consists of them."*

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 28th February, 1850:—Messrs. William Foot Vidal, Avelly, Essex—John Page Cooper, London—John Wellington Clement, Pocklington—Charles Nelson Wilkinson, R.N., South Lambeth—Alfred Whittle, Liverpool—James Samuel Seyer Lang, Yatton, Somerset—Edmund Grasvenor Goulden, Hazelgrove, Cheshire—George Charles Armstrong, Ware, Herts.

* White's Treatise, &c. p. 6.

Original Communications.

BED-SIDE SKETCHES.

BY JOHN CHARLES HALL, M.D.

Fellow of the Royal College of Physicians, Edinburgh; Member of the Royal College of Surgeons, London; Author of "Remarks on the Treatment of some of the more important Diseases, including the principal Diseases of the Eye," &c. &c. &c.

"Concordia res parve crescunt."

[Continued from p. 334.]

No. III. IRITIS—concluded.

Specific Forms of Iritis.

a. Scrofulous Inflammation of the Iris. (*Ophthalmia scrofulosa interna anterior*).

—This disease is often seen in strumous children, and in patients in whom this diathesis exists, about the age of puberty. Mr. Lawrence, many years ago, drew attention to the importance of very carefully examining any affection existing in the eyes of children; for "in strumous children," he remarks, "inflammation existing in the external parts of the eye extends to the iris. This strumous iritis is usually attended by some change in the structure of the cornea: the opaque state of the cornea prevents you from observing the changes taking place in the iris, so that the very existence of iritis is not known until it has gone through its course and come to an end."

In these cases it is necessary to give some mild preparation of mercury, to apply counter-irritation to the back of the neck, or behind the ears, and to keep the pupil fully dilated with belladonna. In giving mercury, the peculiarities of the constitution must not be forgotten, and in that form of chronic scrofulous iritis which is often mixed with chronic corneitis, and now and then with inflammation of the posterior tunics, a combined tonic and alterative treatment must be pursued.

The hydrochlorate of baryta has been strongly recommended by Mr. Phillips, Dr. Payan, and Lisfranc, as a valuable remedy in strumous ophthalmia: it has certainly been useful in some cases, but counter-irritation, mild doses of the grey powder, with rhubarb at bed-time, and the disulphate of quinine two or three times during the day, are the remedies which have been most successful in our own practice. Air and exercise, under proper regulations, must not be passed

over, for without attention to such matters all cases of strumous ophthalmia will be difficult to cure. The food should be light, nutritious, and easy of digestion, and if the circumstances of the patient permit, after the attack has subsided, a sojourn for a month or two at the sea-side will be highly beneficial. The indications here are twofold—*first*, to remove the disease; and *second*, as far possible to alter that peculiarity of constitution on which the local disease is evidently dependent.

b. Syphilitic iritis arises, so far as we have been enabled to form an opinion, from the cases seen during some years at the Lock Hospital, in the hospitals on the continent, and in private practice, in the great majority of patients, from the primary disease having been allowed to heal without the exhibition of mercury. Mr. Hewson remarks that, "iritis, the result of syphilis, is rarely observed except when mercury has been insufficiently administered." In the cases of syphilis reported by Dr. John Thompson, and also by Mr. Rose, treated without mercury, "iritis" is mentioned as "not a very uncommon secondary affection." We have been consulted by patients who (having contracted syphilis from their husbands, either from delicacy or ignorance have abstained from seeking medical advice) were suffering from this form of iritis. A case was mentioned some years ago, in the *Medico-Chirurgical Review*, where iritis occurred in a nurse from syphilitic ulceration around the nipple, induced by suckling a child whose mother had the venereal disease prior to its birth, and this nurse had taken no mercury for the sore around the nipple. A similar case is mentioned by Mr. Middlemore, who remarks, with his usual force and accuracy—"from a careful review of all the cases which have fallen under my observation, it appears to me that iritis occurs much more frequently after a venereal sore has been healed without mercury, than when this medicine has been used for its cure." Our own experience, therefore, appears fully borne out by the best authorities in this country, that iritis is far more frequent and severe, as a secondary symptom, in those patients in whom the chancre has been permitted to heal without the administration of mercury.

Symptoms.—The angular distortion and displacement upwards and inwards

of the pupil, the peculiar tawny colour of the smaller ring of the iris, and the existence of excrescences which, although present in other forms of iritis, are so frequent in the syphilitic variety, as to constitute strong reasons for suspecting that there has been primary symptoms; and a little inquiry will frequently demonstrate other secondary affections, such as tubercular, scaly, or papular eruptions—sore-throat, pains in the limbs, periosteal swellings, &c. &c. &c.

In *syphilitic iritis* the whole substance of the iris is involved; but it has one singular peculiarity, which was first pointed out by Mr. Lawrence, viz. that the inflammation is always of the adhesive kind, never ending in the formation of pus. A lady under the care of this distinguished surgeon suffered from the extension of syphilitic iritis to the deeper tunic; this ended "in the bulging of the sclerotics, which appeared distended by pus:" an opening was made, but no matter escaped; Mr. Lawrence remarking that "lymph, and not pus, had been effused."

In this form of iritis both eyes generally suffer, first one being attacked, and then the other; sometimes its approach is slow and the symptoms slight, the acute attack developing itself by degrees; in other cases a chronic, but not less destructive, course is run: the pain during the day is slight, but at night the temporal or circumorbital pain is remarkably distressing.

Bleeding and mercurialization, belladonna, and frictions of opium and blue ointment, around the orbit, or upon the temple, to remove the circumorbital pains, are the remedies to be relied on. Here the mercury must be given to produce decided salivation, and it may be required in smaller doses to remove the effects of iritis, and the disease which has gained access to the constitution.

When from some cause or other mercury cannot be given, a dram of the oil of turpentine, as recommended by the late Mr. Carmichael of Dublin, may be given three times a day: the iodide of potassium, in the compound decoction of sarsaparilla, will also now and then be useful after this as well as the other forms of acute iritis.

After every variety of inflammation of the iris the eye for a long time remains weak; exposure to a strong light or to cold should ever be, therefore, guarded against, as the disease is apt to return.

During acute iritis the diet must be strictly antiphlogistic, and the room in which the patient lives darkened: when examining the eye it ought not to be exposed to a strong light: we have more than once seen the symptoms aggravated by so doing.

c. Arthritic Iritis. Ophthalmia arthritica interna anterior.—There is yet another form of iritis to which the attention of the student must be directed, which involves, as in syphilitic iritis, the substance of the iris. The disease is attended with considerable constitutional disturbance: it is generally seen in the indolent and the wealthy, and in those who have had regular attacks of gout, although it sometimes occurs when gout has never been developed. Its occurring in persons having the gouty diathesis, the livid redness of the white of the eye, arising partly from the attenuated condition of the sclerotica, and partly from the venous character of the conjunctival congestion, together with the enlargement of the rectal veins, denote the nature of the affection. On examining the eye a little more closely, there will usually be seen, intervening between the margin of the cornea and the redness of the white of the eye, a narrow bluish space; in some cases a perfect ring is formed round the cornea, in others it exists only on the nasal and temporal sides. As the disease advances the centre of the iris is pushed forward towards the cornea: the iris is discoloured and swollen, especially at the pupillary margin, which becomes adherent to the capsule of the lens. The extent to which vision is impaired will depend upon the quantity of lymph exuded into the pupil, except, of course, in those cases in which the posterior tunics are attacked: usually one eye only is affected. As a result of the great conjunctival congestion, there is always some increased mucous secretion; the edges of the eyelids are red and swollen, and the Meibomian discharge is augmented. We have the notes of a case in which the whitish froth, caused by the movements of the eyelids chafing this increased discharge, and which, from its being supposed peculiar to cases of arthritic iritis, has been termed *arthritic foam*, was particularly well marked: it may, however, be present in other cases of ophthalmic inflammation.

In this patient, a lady æt. 56, al-

though, from the very dangerous character of the inflammation, we were particularly anxious to adopt the active treatment seen to have been so advantageous in other forms of iritis, the state of the constitution was such as to render it impossible to employ it without the greatest caution. Leeches were applied to the temple, the pupil kept dilated with belladonna, and a brisk purgative administered; the bowels were afterwards kept open by a solution of the sulphate of magnesia, with the wine of the seeds of colchicum, and tartar emetic. At first, Dover's powder and calomel were prescribed night and morning; afterwards, the 1-20th of a grain of the bichloride of mercury three times a day in the compound decoction of sarsaparilla. Blisters were also applied behind the ears and at the back of the neck. In syphilitic iritis we have seldom seen much advantage arise from their employment; but in this form of the disease they are always useful. The diet, so soon as the violence of the inflammation had passed away, was light and nourishing. The eye was frequently washed with warm water, to which a few drops of the tincture, of opium were added, and, although vision was not so perfect as before, the result was more satisfactory than we had ventured to hope. Every night the edges of the eyelids were smeared with a little mild ointment; the pains in the eye-brow, nose, and face, which at one time were severe, appeared much relieved by frictions with mercurial ointment and opium over the eye-brow, and by the continual application of dry warmth, which a narcotic-herb bag, constantly kept over the eye, supplied. A recurrence of the attack was guarded against by the strictest injunctions against indulging too freely in the good things of the table, and the occasional administration of alterative doses of the acetic extract of colchicum and blue pill. A seton was also placed at the back of the neck, with apparent advantage. Turpentine has been strongly recommended in this form of iritis, but, never having prescribed it, or seen it prescribed by any medical friend, we are unable to say anything as to its advantages. We once, however, saw a case in which the severe frontal pains were much relieved by a few doses of the disulphate of quinine; but here they had an intermittent type.

d. Rheumatic iritis.—In rheumatic and catarrho-rheumatic ophthalmia, the iris is frequently involved, by the inflammatory action extending to it, and vision is soon considerably disturbed. The inflammation, although the proper surface of the membrane is now and then affected, is for the most part confined to the anterior surface of the iris: hence the name of *iritis serosa anterior*. After the continuance of slight superficial pain for some hours, it may be for a day or two, with increased lachrymation and sensibility to light, the sclerotic circumcorneal zonular injection becomes well marked; the iris looks dirty and discoloured: if naturally of a bright hue, it changes to a muddy green; if hazel, to a dirty brown colour: these changes are at first observed in the lesser circle of the iris; the pupil soon becomes contracted and dim, and the pain in the eye is very severe, particularly at night, and lymph is seen to have been poured out, in the fixed pupil, now and then on the surface of the iris, or even flakes may be seen in some cases floating in the aqueous humour. The pain is described by the patient as deep-seated; a disagreeable sensation is often spoken of by the sufferer, of distension in the eyeball—"my eye feels as if going to burst." On examination, the cornea will be seen distended, from an increase of the aqueous humour, and "deep punctiform opacities," says Mr. W. Jones, "often demonstrate that the membrane of Descemet is involved;" the cornea is more or less dim, the edges of the eyelids are red and swollen, but we have not marked that white frothy exudation described as present in the arthritic form. Rheumatic iritis arises from the same causes, predisposing and exciting, as rheumatism; and we have seen rheumatic iritis conjoined with rheumatic inflammation of the knee joint, resulting, as we supposed, from gonorrhoea. Iritis of a similar nature is apt to occur in patients who expose themselves to damp and cold when taking mercury. Rheumatic iritis is always attended by symptoms of great constitutional disturbance: a hot dry skin, full strong pulse, costive bowels, scanty and high-coloured urine, loaded dry tongue, constant thirst, loathing of food, and want of sleep. In the severe nocturnal inflammatory

With regard to treatment, what was said in speaking of acute iritis applies with equal force here: bleeding and calomel are the remedies to be relied on. We think advantage is derived from a full dose of Dover's powder at bed-time, with calomel; and then calomel and opium during the day must be given, so as to make the gums sore as quick as possible. The pupil must be dilated with belladonna, and the bowels kept open with an emetico-cathartic. When the disease begins to yield, counter-irritation will be both necessary and useful. The nocturnal pains may be mitigated by frictions with the ointment already prescribed. The cautions given as to the after-treatment of the patient when speaking of the other acute forms of the disease apply equally here; but every case in each variety of iritis will present certain peculiarities of its own, requiring much care and attention on the part of the practitioner.

e. Iritis after typhus fever (post febrile ophthalmia).—This form of the disease we have never seen. It must, however, be noticed that at times within the last few years, in Dublin, Glasgow, and Edinburgh, a remittent fever has extensively prevailed. It is described as not very fatal, the deaths only amounting to about three and a half per cent. The fever is now and then accompanied by petechiæ, and its first paroxysm occurs about seven days from the commencement of the attack; a relapse invariably happens, but seldom more than once. In young adults about a fortnight (or even some months) after convalescence from the fever, when using the eyes too much in a strong light, or after exposure to cold, this disease set in. Bleeding and mercury in the first instance, and then counter-irritation and tonics, was the most successful treatment.*

Thus have we endeavoured to group together some of the leading points of practical information in the treatment of the *acute, chronic*, and specific forms of iritis, one of the most important of the diseases which attack the eye;—important for us to understand from the frequency of its occurrence—important to understand, because so rapid and so destructive is its

* Notwithstanding the general debility, bleeding was found necessary. For our knowledge of the existence of this affection we are indebted to the papers of Dr. Mackenzie, *MED. GAZ.*, 1843, and to Dr. A. Anderson, London and Edinburgh Monthly Journal, October 1845.

progress, that by prompt and proper treatment only, can vision be preserved; and what reward can be greater, what can afford more pleasure to the rightly constituted mind, than the conviction, that, under the divine blessing, we have been instrumental in restoring to its usual perfection an organ so beautiful and so useful as the eye,—it may be in an individual on whose exertions the prosperity of a wife and family depend?

Acute iritis, rapid in its course, and fearful in its consequences, it has ever struck us as the disease which, of all others, the professors of homoeopathy ought to select for the exhibition of their boasted superiority over the disciples of legitimate physic. May we ask, most respectfully, if their globules can arrest the inflammatory action going on to the destruction of vision?—can they produce rapid absorption of the exuded lymph?—can they restore to the iris its wonted brilliancy?—can they give back to a father that eye-sight without which he cannot labour to buy his wife and children bread? If they can do this, we will become worshippers even at this schismatic shrine: provided always, and be it understood, we insist on seeing the preparation of their remedies, and to be thus satisfied the homoeopathist is really giving what he pretends,—a point, we can assure our readers, of no small importance, if what has recently reached our ears be true. We would also, if possible, select a professor of the art for the trial, not daring to be a party to an experiment on any other of our species: this would be an opportunity that would doubtless be eagerly seized upon,—a golden chance for proving, in their own persons, the sincerity of their faith. But, to be serious, fain would we hope that man's nature has not yet fallen quite so low,—that the human family does not contain any one so reckless and unprincipled as to dare to administer his *infinitesimal* doses in a disease so quickly destructive as iritis, if improperly treated, and thus to risk—rather should it be said to insure—the loss of an organ so delicate, so beautiful, so all-important, as the eye, when for the last fifty years a certain remedy, if promptly and efficiently administered, has been known. What has been said of iritis applies equally to every other acute malady. But perhaps, however

unwillingly, we have done this new-born science wrong: perhaps it is chronic and not acute diseases which yield on the administration of the hundred thousandth part of “one poor scruple.”—perhaps neither. We think it is Tully who remarks—“*Vera gloria radices agit, atque etiam propagatur; ficta omnia celeriter, tanquam flosculi, decidunt; nec simulatum potest quidquam esse diuturnum.*”

Sheffield, Feb. 1850.

ON THE PATHOLOGY OF THE AORTIC AND PULMONARY SEMI- LUNAR VALVES.

By JOHN MOORE, Esq.

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A PAPER, by Dr. Monneret, “On the Structure and Physiology of the Valves of the Aorta and Pulmonary Artery” (presented to the Académie des Sciences on the 16th of October last), as quoted by the *Lancet* of Dec. 29th, contains the following announcement:—

“The semilunar valves of the aorta are furnished with two distinct muscles capable of moving and putting them on the stretch, thus assisting circulation. The first of these muscles is composed of bundles of fully developed fibres, which may easily be seen with the naked eye. Some of these, four or five in number, arise from the superior angle of the valve, and descending, become interwoven on the raphé with the fibres situated on the other side, or on a second fold, which is situated above the free margin. The other fibres are shorter, and run across the whole breadth of the valve. The action of this muscle is to raise the valves, to bring them nearer the parietes of the vessel, and to support the valves when they are lowered. The second muscle, formed of vertical and parallel fibres, extends from the free margin of the valve to the part adherent to the vessel. The fibres are closely set, finer than those of the elevator, very near each other, and numerous in the lower part close to the corpus arantii. The office of this muscle is to lower the valve, and to contribute, along with the synergical contraction of the elevator, to maintain it in a fixed position. These fibres, under a power of 700 diameters, had all

the characters of the muscular fibres of organic life, being, namely, smooth and cylindrical. The valves are powerfully raised by the contraction of transverse muscle, which acts at the same time and in the same direction as the ventricles. It considerably aids the propulsion of the blood, by forcing away the amount of sanguineous fluid contained between the valves and the aorta. The depressor muscle is the antagonist of the foregoing."

It is singular that such a description as the preceding should be published as a novelty at the present day; and the circumstance fully evinces the necessity of consulting the older writers on anatomy and physiology, before venturing to offer, as novelties, to the scientific world, facts which may, indeed, appear to the reporter original, but which,—as a reference to works of a century or two back would perhaps convince him,—*have only been forgotten*. Such, at any rate, has been the case in the instance of Dr. Monneret's description of the aortic and pulmonary semilunar valves; for, though the standard works of the day describe them as simple membranous structures, from which it must necessarily be inferred that they are mere passive instruments in the circulatory process, to be driven hither and thither by the advancing and retrograding currents, their compound construction, and the more important office which truly appertains to them, have been long since detailed with extreme minuteness and accuracy; as a perusal of the following quotations will fully demonstrate.

Verheyen (*Corporis Human. Anat. Bruxellæ, apud Fratres T'Sterevens, 1710*) writes thus, at p. 165, Tract iii. cap. viii. :—

"Tam in aortæ quam arteriæ pulmonalis principio reperiuntur tres valvulæ, à figura dictæ semilunares quæ sunt membranulæ tenues versus cordis ventriculos et lateraliter arteriæ parietibus adherentes, versus ductum arteriosum omnino liberæ. * * *

"Quamquam dictæ valvulæ, primo intuitu apparent simplices pelliculæ; penitus tamen inspicienti faciliè cernitur illarum structura esse admodum artificiosa. Invenientur etenim compositæ ex membrana duplici, cujus altera lamella, quæ scilicet arteriæ latus respicit, constructa est ex fibris per valvulæ medium secundum ductum arteriæ tendentibus; at sensim ab ea rectitudine deflectentes locantur magis

transversim, nonnihil versæ valvulæ principium elevatæ. Hoc cum fiat, in atroque latere, duo exurgunt dictarum fibrarum ordines, dexter scilicet atque sinister. Plurimæ autem earundem fibrarum conveniunt in medio limbi, qui a corde remotior est, ibidemque reperitur nodulus quasi tendineus, magnitudine ferè seminis radiculæ; qui apparet formatus ex iisdem illis fibris, saltem earum haud paucis ibidem concurrentibus. At, præter vulgares illas fibras, inveni in utroque latere valvulæ tres crassiores (aliquando in altero latere tantum duas) ac firmiores, procedentes ex ipsa arteriæ substantia, et valvulam obliquè percurrentes versus nodulum, in quo desinunt; et quidem aliquando conveniunt antequam nodulum attingant."

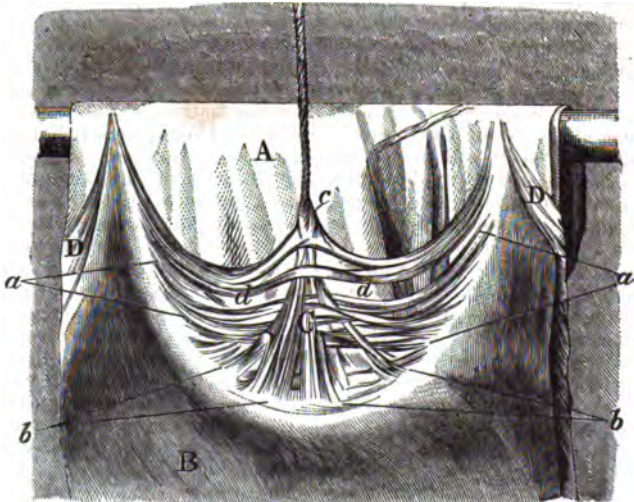
Cowper, in his "*Myotomia Reformatæ*," (Lond. Knaplock and Innys, mdcxxiv.) delineates these valves (Tab. xxxviii. fig. 5) as seen in the ox, and writes thus concerning them :—"On the external surface of these valves, i. e. next the trunk of the artery, you will find these carnosous fibres variously interwoven, and such large muscular bodies that you may thrust a probe underneath them without wounding the internal surface of the valve."

So Winslow (*Exposition Anat. de la Structure du Corps humain. A Paris: Guillaume Desprez, mdcxxxiii.*) writes at p. 592—"En examinant ces valvules par le microscope, on trouve des fibres charnues dans la duplication des membranes dont elles sont composées."

Haller (*Courses of Lectures, &c. &c., translated by Sam. Mähles, M.D. Lond. W. Innys, mdccliv.*) thus describes the function of these valves (p. 81, § 100) :—"From the upper and posterior part of the right ventricle a way leads into the pulmonary artery. . . . From the inner surface of the artery, where it is joined to the heart, three semilunar valves arise, by a reduplication of the arterial membranes. . . . The middle of the edges in each of these valves is generally divided by a small, dense, callous body, of a conical shape. . . . Betwixt the two membranes of the valve appear some muscular or tendinous fibres, partly in a transverse position, some of which hold fast the valve to the next contiguous side of the heart, leaving sometimes spaces between them in a reticular manner. Other fibres ascend from the basis of the valve, and, by growing to the callous corpuscle,

draw back the said valve, and open its concavity. So, further (p. 88, § 110), he writes—"The semilunar valves of the aorta differ little from those in the pulmonary artery. . . . The fibres of the valves, both transverse and ascending, are here somewhat more conspicuous." In an essay on the "Structure of the Lungs," (Lond.: Longman. 1844) I have stated (p. 87)—"the concavities of the semilunars are expanded, not by mechanism alone, for this, however perfect, would still admit of some regurgitation; but, superadded to the membranes forming the valves are muscular fibres: by contact with the returning column of blood these are stimulated to contraction, and by this contraction the cartilaginous nodules, into which they are inserted, are so closely approximated in the centre of the cylinder that they admit not of the passage of a single drop of blood." A more extended in-

vestigation of their structure has, however, induced me to modify this opinion; for, if this opinion were correct, it would be necessary that the vertical muscle should act from the centre of the cylinder: this, of course, is not the case, but, when the valve is in close contact with the arterial lining membrane, the attached extremity of the vertical muscle lies on a plane internal to that of the nodulus arantii, into which it is inserted: hence, the contraction of this muscle will draw the free margin of the valve towards the centre of the vessel, increased by the recession of the arterial walls to form the "sinus of Valsalva,"* into which the blood readily finds access, and completes, by its mechanical pressure, that approximation of the valves which has been already partly effected by the inherent contractile power of the valvular apparatus itself.



Section of Pulmonary Artery of the Horse.

- A. Lining membrane of artery.
- B. Internal surface of infundibulum of right ventricle.
- C. A semilunar valve raised by a string.
- DD. Sections of remaining valves.
- aa. Transverse muscular fibres.
- bb. Vertical fibres, the majority of which become blended with the transverse, but a few terminal fibrillæ are prolonged to the nodulus arantii, into which they are inserted.
- c. The nodulus arantii.
- dd. Double transparent membrane reflected over the surfaces of the muscular fibres and their interstices.

* The sinuses of Valsalva appear to be provided for the purpose of effecting an equable pressure upon the whole vascular surface. Were the cylinder here of the same calibre as it is above the level of the valves, they would sustain

but little pressure, excepting upon their bases; but the increased bulk of blood received into the sinuses produces a considerable lateral pressure also upon the margins of the valves opposed in the arterial centre.

But I have noticed Dr. Monneret's paper, not only because the structure of which it treats is of anatomical and physiological interest, but also because, when viewed pathologically, it appears to me to possess considerable importance. Let us suppose, for instance, the vertical (abductor) muscle (*b b*) to be temporarily paralysed, or its antagonist transverse (adductor) muscle (*a a*) to be spasmodically contracted: on the occurrence of the resilient action of the artery, the blood, being unable to insinuate itself within the concavities of the semilunars closely apposed to the arterial parietes, would partly regurgitate into the ventricle, communicating to the ear the same morbid sounds as would result from organic patency of the ventriculo-arterial opening. So, if the respective normal actions of the two muscles were reversed, i. e. the transverse muscle relaxed, and the vertical fibres contracted during the ventricular systole, the passage of the circulating fluid from the ventricle would be mechanically impeded, and the same prolonged murmur which attends organic constriction of the arterial inlet would be produced. A mere inspection of the constituent fibres of the semilunar valves will evince the probability of the above hypothesis, and the symptoms attendant upon certain diseases afford strong collateral evidence in its favour. Dr. Todd has noticed the fact (see Brit. and For. Med.-Chirurg. Rev. January 1850, p. 19) that morbid sounds (sometimes aortic systolic) occur in chorea. He accounts for it, indeed, as follows:—"Many of the patients who suffer from chorea are of a rheumatic diathesis, and in consequence of this rheumatic state they experience an insidious endo-carditis;" but, from the employment of the word "*mewy*," it would appear that this complication was not present in *all* the cases in which the morbid aortic bruit existed: then, if there were but one exception, some other cause than that assigned by Dr. Todd must be sought; and would not the aortic valvular muscles, in common with the muscular system generally, be liable to the jactitation which characterises this disease? if so, we have a good and sufficient cause for the occurrence of this simulation of organic lesion.

Hysteria, again, is often attended by aortic bruits, which have occasionally induced a ~~simulation of the existence of~~

organic disease, and yet the abnormal sounds have been entirely dissipated by tonic and sedative remedies, which have little or no effect in removing structural lesion, but which do possess an extensive curative influence over muscular irritability—an important item in the mode of causation of hysteric symptoms. But supposing the previous arguments to fail by reason of a possibility existing that length of time and remedial measures may have sufficed, in the cases in which the bruit has disappeared, to dissipate some slight organic lesion on which a bruit has depended; yet, still, the experience of any one who has had frequent opportunities of making auscultatory examinations of hysterical patients, must afford numerous reminiscences of cases, in which morbid physical sounds—intense to-day, entirely absent to-morrow,—have occasionally intermitted hour by hour. For these evanescent pathological symptoms there must be some efficient cause, which I believe to be irregular action of the valvular muscular fibres, whose office, if they have any, must be to elevate and depress the sail-like margins of the valves. Galen writes—"Ubique sapiens Natura temere nihil neque sine causa quidquam fecit." If the truth of this axiom be granted, and I think few will have the hardihood to dispute it, then we may fairly conclude that the action of the two sets of muscles is absolutely necessary to the due performance of the office of the semilunar valves: it follows hence, that if their normal action be arrested or inverted, as in common with that of other muscles it is of course liable to be, there will naturally result—in the one instance, imperfect closure, in the other, defective dilatation of the arterio-ventricular opening; and we may conclude also, that these valvular conditions will be accompanied by physical symptoms, analogous to those which are considered pathognomonic of like imperfect action, dependent upon structural valvular changes.

SMALL-POX IN THE WEST INDIES.

THE latest accounts from the West Indies state that the small-pox had been raging fearfully at Montserrat, and the mortality was said to be five or six per diem, with as many as 700 cases in the island. The greatest alarm existed.

ON
NÆVI MATERNI AND DILATATIONS
OF THE VESSELS OF THE
INTEGUMENT.

BY HOLMES COOTE,

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Hospital.

I AM induced to offer a few observations upon the intimate structure of those spots or markings of the integument known as *nævi materni*, because I attribute the very great discrepancies in opinion, both as to the symptoms by which they are characterised and the course which they ultimately take, to a want of accurate information as to the immediate seat of the disease in its several varieties. The word *nevus*, which corresponds exactly with "mother-spot," or "*Mutter-mahl*," is the Latin expression for any congenital mole or mark on the body, and was formerly applied to two very different conditions of the integument: the one, a simple discolouration, dependent upon the accumulation of pigment-cells under the cuticle; the other, a soft red spot, caused by a varicose or dilated state of the cutaneous bloodvessels. Of the former, but little need be said; it is, as Dr. Bateman described it, a superficial stain-like spot of yellowish-brown or brownish-black hue, and sometimes covered with long hair, when it resembles in a slight degree the skin of the rat or mouse: always congenital, and enlarging only in accordance with the growth of the body, it rarely requires surgical interference. The great pathological point of interest connected with this subject is, that when melanosis attacks the skin as a primary disease it is always in one of these dark-coloured spots or moles that the morbid accumulation of pigment is first observed: the knowledge of this fact should deter us from unnecessarily irritating them by acupuncture needles or by caustic.

The latter, or vascular *nevus*, designated in modern surgical works by the barbaric term of "*teleangiectasis*," consists of a congeries of bloodvessels, and has its seat either in the cutis or in the subcutaneous areolar tissue, where it was described by Petit under the name of "*loupes variqueuses*." I read in a surgical manual that it is doubtful whether

this is always a congenital affection, or whether it may be developed in after-life. There is no doubt upon the matter: infants are frequently born with these *nævi*; but in a very great number of instances the disease is first noticed a few days or a few weeks after birth as a bright red spot, perhaps not larger than a pin's head, either imbedded in, or projecting from the skin. The cutaneous *nevus*, of more florid red colour, the more superficial its seat, resembles, as it enlarges, a small thin-walled bladder, filled with blood, and surrounded by dilated and tortuous vessels, visible through the delicate transparent integument. By pressure, which is the more easily effected if the *nevus* be placed over a bone, the blood can be squeezed out, when the natural colour of the skin is partially restored; but soon the blood is seen re-entering the dilated tubes, and its bright red colour is restored: after a time it becomes slightly raised above the level of the skin, and extends deeper into the subjacent parts. The superficial vesicles may give way from a blow, or from some strain or effort, and hæmorrhage will ensue; but this is easily controlled by slight pressure, the blood trickling down without force, as from an inelastic-walled sinus. The same remarks apply to *nævi* of the mucous membrane of the eyelid or mouth: in these situations, however, their growth is more rapid, and they are more elevated and extend deeper.

The subcutaneous *nevus* which, though seated in the subcutaneous areolar tissue, always involves the cutis to some extent, consists of a dilatation of those vessels which pass from the deeper part to supply the skin. When of any size, it appears as a soft elastic tumor, frequently of bluish-black colour over the most prominent part; pressure diminishes its size much, but the blood can seldom be squeezed out entirely, and when the pressure is relaxed the blood slowly distends it to its former condition. When elevated, it is painful upon pressure, as may be known from the fact of the child crying and endeavouring to remove the part from the examination of the surgeon, or from its never lying upon the side of the disease during sleep. After a time it may form for itself a cyst of condensed areolar tissue, which, though capable of yielding slowly, puts a limit to any sudden distension. Though small at first, and

often uncertain as to the period of activity, these nævi never lose their disposition to increase: one of the most striking instances of their rapid growth I witnessed in a child only five weeks old, over whose sternum and thorax there was a large subcutaneous nævus, involving the skin, and measuring two inches in breadth and two inches and a half in length. The definition of nævi, given by Lassus, and quoted by Mr. S. Cooper, is graphic and correct—namely, that “they are an organic malformation of the skin, the natural texture of which does not exist, but a plexus of vessels is substituted for it, not endued with the natural sensibility of the cutis itself.” But the inference drawn from this definition, that “they generally continue stationary during life, and may be regarded rather as deformity than as disease,” is incorrect in the extreme, and is only explicable upon the supposition that the pigment stains are referred to in the latter sentence. There is scarcely any exception to the rule that a true vascular nævus, once formed, will grow, with different degrees of rapidity and at irregular intervals, as far as we know, indefinitely. It seems to act like a contagious disorder, spreading amongst the vessels in its immediate neighbourhood; consequently, the larger its circumference, the quicker, *ceteris paribus*, is its increase, and the more widely spread the tendency in vessels apparently healthy to take on the same morbid action.

Mr. Cooper observes that the nævi familiar to us as vascular cutaneous or subcutaneous swellings, occurring usually in those parts of the body where the circulation is most active—namely, the skin of the face and head, the chest, or upper extremities—“are either of the same nature as the disease well known by the name of aneurism by anastomosis, or bear a considerable resemblance to it.” Now, under the name of aneurism by anastomosis, Mr. John Bell described “a species of aneurism resembling some of the bloody tumors which appear in new-born children,—a disease originating from some accidental cause, marked by a *perpetual throbbing*, growing slowly but uncontrollably, and rather irritated than checked by compression. To how many has it happened to witness in young children, patients of this hospi-

tal, pulsating nævi connected with the ramifications of arteries? I cannot recal to mind a single case, and am consequently at a loss to appreciate the statement of the late Mr. Liston, that “some of the large nævi in children pulsate synchronous with the heart’s action.” A pulsating tumor, however, occurs, as Mr. J. Bell remarked, in adults, and in those situations where the circulation is most active, such as the integuments of the head or face, and more particularly the lip.

As aneurisms by anastomosis are very uncommon, I will briefly state the particulars of a case which I had the opportunity of seeing and examining three years ago. A gentleman, forty years of age, consulted Mr. Lawrence for a pulsating tumor, occupying the right half of the lower lip. He stated that it was congenital, and had increased slowly up to the present time. Some time ago the right facial artery had been tied by another surgeon, and during the operation profuse hæmorrhage took place from a vessel towards the side of the tumor. No perceptible diminution in the swelling ensued,—a result which will not surprise any accustomed to view, in an injected subject, the free anastomosis of the coronary arteries of the right and left side of the face. Mr. Lawrence extirpated the whole pulsatory mass with the knife Jan. 11th, 1847. There ensued very little more hæmorrhage than would have taken place after extirpating a cancer of the lip. The ends of the coronary arteries and of one smaller vessel were tied, and the patient recovered without an unfavourable symptom. Mr. Lawrence kindly gave me the tumor to examine, and I injected it with mercury. It was composed of arteries, in the natural state of the diameter of a large pin, dilated for about an inch of their course into great sinuses or canals, the cavity of which equalled that of the radial artery in the adult. They freely communicated one with another, and were lodged in the natural structure of the lip, to which they were attached by loose areolar tissue. Upon the divided surface there were the cut orifices of eight arteries, some of them of considerable size. The walls of these dilated arteries were thin, but I failed in detecting anything remarkable by microscopical examination. From this an instance of aneurism

It is a pulsating swelling connected with a few arteries of some considerable size. It is obvious that there exists a wide difference between this disease and the nævus of infants, as commonly seen, which consists in a pulseless red vascular spot, seated in or under the integument, and composed of dilatations of the capillaries which constitute the skin.

Therefore *aneurism by anastomosis* consists in a dilatation of several arteries for a certain part of their course.

Nævus maternus is composed of a congeries of capillaries.

The two diseases are essentially distinct, and require different modes of treatment.

There remains a third variety of vascular tumor, of which there have been of late in the hospital some good examples. The first case of this kind which fell before my observation was in the year 1845.

A delicate young man, æt. 20, an undergraduate at Oxford, consulted Mr. Lawrence for an oblong, pulseless, blue-coloured, vascular tumor, of four years' duration, situated in front of the abdomen, over the inferior ribs of the right side. It was firm, having been frequently cauterised. The blood, when squeezed out by pressure, did not readily flow in again.

The patient attributed the disease to the rubbing of the braces; indeed, his attention was first directed to the part by the irritation which he experienced in walking. The whole mass, including some diseased integument, was extirpated by the knife: one small cutaneous artery only was tied, but the bleeding was inconsiderable. The tumor, upon examination, was found to consist of a number of tortuous and dilated vessels, which I concluded, from the thinness of their walls, the collapsed state of the cut extremities, which were healthy, the want of pulsation during life, and the general varicose appearance of the part, to be *veins*. They contained a thin watery yellowish-red fluid, which, under the microscope, was seen to contain blood-discs in small quantity, altered in shape, and jagged at their edges; granules, probably the remains of decomposed blood-discs; epithelium, and fatty matter.

The wound healed without a bad symptom, and the gentleman left town in a fortnight.

Now in a vascular tumor removed recently in the hospital by Mr. Lawrence, which closely resembled, in its general characters, the vascular swelling just described, I was interested in observing several of those hard concretions known by the name of *phlebolithes*. *Phlebolithes*, or vein-stones, are confined to the venous system, and their presence in such a tumor may be taken as very conclusive evidence as to the character of the vessels affected. It is the opinion of the best pathologists that vein-stones form in consequence of a limited sub-inflammatory process, which determines a coagulation of the blood in distinct layers; the coagula, for the most part spherical in shape, continue for a length of time subject to an interchange of action and reaction with the passing current of venous blood, and there is deposited in them phosphate of lime and magnesia, until the whole clot is transformed into an earthy mass. They form, then, originally, not external to, but within the vein. I believe that the same phenomenon has never been observed in the arterial system.

It has been remarked of these venous tumors, that although they have a tendency, in common with other similar degenerations affecting the vascular system, to indefinite increase, they manifest an occasional disposition to invest themselves in a capsule of the areolar membrane with which they are surrounded: their further growth then becomes limited, and they may remain stationary for many years; but we have no fair grounds for anticipating, under any circumstances, a spontaneous action determining to a permanent cure.

In connection with these venous swellings, affecting the integument and the subjacent areolar structure, I may mention a morbid degeneration of the veins of muscles, an instance of which was witnessed a few days ago in the dissecting-room attached to this school. A large portion of the vastus externus muscle, below the broad tendon of the gluteus maximus, was converted into an irregular soft bluish-black mass; the muscular fibres, pale and wasted, being separated and pushed aside by tortuous and dilated veins. In the mass, which measured about four inches in length and two and a half in breadth, there was no increase, either in number or size, of the arterial ramifications; but

the small veins, not capillaries, were enlarged to five or six times their natural diameter: the coats were thin; the tissues in which they ran loose and healthy. Let it not be thought that in bringing forward a case of varicose veins in muscle I am wandering from the subject: the affinity between the dilatations of arteries and veins, whatever may be their size, and the condition of the capillaries constituting an ordinary *nævus*, is considerable. In further illustration of these points I may mention a case which I saw many years ago, the particulars of which are firmly impressed upon my memory:—A little girl, the daughter of a physician, had a soft congenital swelling, with undefined edge, the size of half a walnut, over the right deltoid muscle. As it was increasing in size, it was examined by several surgeons, who concluded, from its situation, its softness, the freedom from pain, and other symptoms, that it was a fatty tumor. Its removal being thought advisable, an incision was made through the integuments of the shoulder, in the belief that there would be brought into view a lump of soft fat, surrounded by a loose capsule; but the incision was continued down to the fibres of the muscle without displaying any thing morbid, and it became obvious that the mass, whatever might be its nature, was situated deep under the deltoid muscle, in the vicinity of the shoulder-joint. Now I scarcely need remark, that, as a general rule, the deeper seated a tumor the more unfavourable is its character; and the idea immediately suggested itself, that in the present instance it might prove a medullary growth, which would involve the loss of the whole upper extremity. The deltoid muscle was divided longitudinally, when a vascular mass was discovered imbedded in its substance: the bleeding was inconsiderable, and for the most part venous; and the morbid structure was readily removed. The case terminated perfectly well, and I understand that the patient, now full-grown, has little or no scar left to commemorate the event.

If we group together the different vascular tumors to which allusion has here been made, and which include, as far as I know, all the varieties affecting the skin and subjacent soft parts, we may arrange them in the following order:—

1. *Aneurisma per anastomosem*, which pulsates synchronous with the heart's beat: a true aneurism of the smaller arteries, involving all their coats and their entire circumference.

2. *Nævus*, affecting the capillaries either of the skin (cutaneous) or of the subjacent areolar tissue (subcutaneous), the common *nævus* of infants, which does not pulsate.

3. The venous swelling, which likewise does not pulsate, and which has been observed in the subjacent areolar tissue and in muscle.

I regret that it is not in my power to describe from microscopical examination the condition of the walls of the dilated vessels. It would be highly interesting to ascertain whether there was any change in the elastic coat of the vessels, which would explain the reason of their yielding to the pressure of the current of blood.

It so happens, however, that the means employed for cure are such as to destroy the diseased parts *in situ*. It rarely happens that a surgeon willingly undertakes to remove by the knife from infants, all of whom bear the loss of blood badly, a tumor composed entirely of vessels: the mere division of the skin is followed by a flow of blood sufficiently profuse to blanch the child; and the further steps in the operation become obscure and tedious. Even in those cases in which extirpation becomes necessary at a more advanced period of life, the structures have been mostly blended, hardened, and changed from what they formerly were, by the previous application of the ligature or of caustics.

In the case of venous tumors I have observed that the tortuous and dilated vessels become ultimately adherent one to another, and that portions of the tubes, containing blood, are cut off, and isolated by such adhesions: the blood, no longer in the current of the circulation, undergoes change; the blood-discs become jagged at their border, then they resolve themselves into granules, and which, ultimately separating, float free in a serous fluid, thinner than the serum of the blood, in consequence of a secretion of water from the walls of the cysts into which these isolated portions of the veins are converted. The walls of the cysts, which retain little or no trace of their normal characters, become thinned and absorbed where adherent,

so that communications are established between adjacent cysts; and when a tumor thus formed is cut open, it resembles a common cystic tumor, the cysts containing a fluid, which, though originally blood, has lost its red colour by the disintegration of the blood-discs, and has become thinner from the influence of the secretion from the cyst-wall. From such a tumor it would obviously be impossible to squeeze out, during its connection with surrounding structures, the whole, or even any great part, of the fluid contained in its cells: blood could be expelled only from those vessels which were continuous with the surrounding healthy veins. It is possible, therefore, that some doubt might be entertained as to the nature of such a swelling, both from the characters which it presented when *in situ*, and the appearances brought to view by examination after removal.

I have purposely avoided entering upon the question of treatment, as it would lead me far beyond the proper limits of the present communication.

CHARGES FOR INQUESTS IN MIDDLESEX.

At a recent meeting of magistrates for the County of Middlesex, the report of the Committee of Accounts and for General Purposes was read. It stated that the expenses of the various coroners during the last month had been as follows:—Mr. Wakley, from January 1 to February 11, 142 inquests, £391. 3s. 6d.; Mr. Baker, from January 1 to February 15, 135 inquests, £451. 14s. 3d.; Mr. Bedford, 32 inquests, £83. 10s. 4d. The report was received and adopted.

It would thus appear that during a period of forty-five days, there were held 309 inquests, being on the average about seven per diem, of which Mr. Wakley held 3·4, and Mr. Baker 3; the charges of the latter being proportionably greater than those of the former. The total cost to the county for six weeks was £926. 10s.

This is at the rate of 2506 inquests per annum in this county alone, at a cost of £7514. Some have, as we think, wrongly attributed the great increase in the expenses of inquests to the payment of medical fees. It would be desirable in the next report to have a statement of the number of inquests held in which medical evidence was called for, and the amount paid in medical fees.

MEDICAL GAZETTE.

FRIDAY, MARCH 8, 1850.

In our last number we made some remarks on the new resolutions for the admission of members to the fellowship of the Royal College of Surgeons. The whole question has been so involved, and the facts have been so misrepresented and exaggerated, that there is some difficulty in determining what is at present the real cause of dissension between the Royal College of Surgeons and those who assert that they represent the views and interests of all the members of the College throughout the empire. We shall endeavour to sift the details, and place the matter in a fair way before our readers.

It is quite obvious that the Council of the College have made a very reasonable concession regarding the fellowship. It will not go far enough to satisfy the demands of some; but we believe that it will be found to meet the wishes of the majority of the members whose diplomas were dated antecedently to the issuing of the charter in 1843. These alone were injured by that charter; and it is for them, therefore, to pronounce a judgment on the propositions of the College. Among the demands made by the National Association in March 1845, we find the following:—"Is the Council of the College prepared to reconsider their charter, and to place those members who were in practice *before it was granted* on a level with the fellows?"*

It is clear, from the form of this question, that the grievance was then considered by the Association to affect only those who were in practice *before* 1843; and we cannot see on what equi-

* MEDICAL GAZETTE, April 11th, 1845, vol. xxiv. p. 905.

table principle others, who were not members of the College when that charter was issued, but have become so since, can complain of its provisions,—or consider that they were treated with injustice, when it was a bye-law of the College at the date of their membership that they could attain the fellowship *only* by *examination*. In this respect we feel compelled to dissent from the view taken by the Manchester Medical Reform Committee,* in their ably written letter to the President of the College. We contend that no injury was inflicted by the charter of 1843, except upon those individuals who then held the diploma of the College; and they alone, as the National Association formerly admitted, are entitled to redress. Unless this date be taken for the admission to the fellowship *without examination*, we do not see how it is possible to escape from the conclusion that *any* person becoming a member at *any* future time has an equal right to be admitted in rotation. To assume, as a boundary, the date of a new charter, which is merely of a remedial character, and supplementary to that of 1843, would be purely arbitrary: such a proceeding would justify a complaint of unfairness from all those who might become members subsequently to the date at which it was issued. The Manchester Reform Committee cannot contend for the perpetual existence of two roads to the fellowship—one with, and the other without examination; and yet, unless this be admitted, it appears to us that their assumption regarding the date for the admission of unexamined fellows is quite indefensible.

The present propositions of the College meet the former request of the Association as nearly as can be reasonably expected. The members who *were* in *practice* before the charter was granted, will be henceforth annually placed "on

a level" with the unexamined fellows, according to seniority. We for the present put aside the views of the "universal suffrage" men—those theorists who wish to carry out a Ptolemaean principle, and reduce the profession to a lower instead of raising it to a higher level. We rather address ourselves to the plain and sensible propositions contained in the Manchester letter already referred to; because we believe that, for the most part, this letter really embodies the sentiments of men who occupy a respectable rank as practitioners.

In the Manchester letter a standing of *fifteen years* is assumed as a fair qualification. In the College resolutions one of *twenty years* is taken. We do not apprehend that this difference will be any obstacle to an arrangement. Were the Council of the College influenced by purely mercenary motives, as it has been attributed to them, they would at once adopt the term of the Manchester Committee; but their desire is not to reduce the value of the fellowship by making it too common, or by admitting too large a number of members at once. Their present plan will, it is presumed, according to one calculation, throw the fellowship open to a thousand members. The recommendation by six fellows, and the declaration of not openly trading in medicines, are points in which the College and Committee agree. We think that the Committee are right regarding the non-payment of a fee. In fact, this is the only point which is substantially at issue with respect to the admission of old members to the fellowship. For reasons assigned in our last number, the demand does not appear to us to be equitable. But it is so far a concession on the part of the College, that but for this proposition, there would have been no access to the fellowship by old members, except with examination, and on the payment of the same fee.

* See our number for Jan. 26th, 1880, p. 171.

The questions regarding the fellowship without examination in the supplementary charter are, therefore, reduced within a small compass :—

1. Shall it be restricted to members admitted before the charter of 1843, or be made common to all who may have become members subsequently? To restrict it to the date of the supplementary charter would be arbitrary, inconsistent, and unfair.

2. Shall a standing of fifteen or twenty years be required?

3. Shall those who "openly trade" in medicines be excluded?

4. Shall all members before 1843 be admitted, or shall a recommendation by six fellows be required for the election?

5. Shall a fee of ten guineas be paid, or shall the candidate be admitted without payment?

It must be remembered that, in deciding these questions, the application to the Crown for a supplementary charter is entirely optional with the College. No charter will be forced upon that body by Sir GEORGE GREY, notwithstanding what is said about pressure from without; nor do we believe that, whatever course medical legislation may take, its ancient rights and privileges will be abrogated or destroyed, even by a reform ministry. The College of Surgeons in this country stands in a peculiar position. Unlike the Apothecaries' Society and the College of Physicians, it is not a "protected" corporation. There are no acts of Parliament to compel professional men to take out its diploma; but it has so strong a hold on public opinion, that there are few who like to venture into practice without it. These are facts strongly in favour of the support of the College by *any* government; and, until the helm of state is placed in the hands of a LOUIS BLANC or a LEDRU-ROLLIN, we apprehend that any attempt

to overthrow the College, either directly or indirectly, will prove a signal failure. A concession has been made, which, if it does not meet the wishes of many, must, we believe, satisfy those of a reasonable majority of the profession. We should like to see the proposition which would satisfy *all*. The only part of the fellowship question really at issue is the payment of the fee; and the old members (before 1843) have now to consider whether it be desirable to agitate on this matter. Should it be deemed of sufficient importance, it is our belief that a petition on the subject, signed by a majority of those who were members of the College *before the date* of the charter, would receive proper attention from the Council.

Two other questions have been combined with that relating to the fellowship—namely, the admission of fellows to seats in the Council, and the foundation of a new college for granting licenses in surgery, as well as in other branches of medicine.

By the 4th article of their recent reply to the National Institute, the Council state "that they cannot, consistently with the object for which the College of Surgeons was instituted, consent to any proposal for introducing into the Council *those who practise pharmacy*."* The exclusion, therefore, as we read it, applies only to those, whether fellows or members, who dispense medicines for their patients. In the 2d article of the reply, "surgeons in general practice," or "general practitioners," are excluded; but, in the absence of any explanation of these terms, we take it that the 4th article qualifies the 2d; and, therefore, by "general practice," we are to understand that the "practice of pharmacy" is necessarily included.

It is to be regretted that the Council of the College have not been a little

* MEDICAL GAZETTE, Feb. 22, p. 349.

more explicit in their reply; it would have had the effect of saving a large amount of inkshed; but, if words are to be taken according to their plain meaning, the Council will carry with them the views of a large majority. On this subject we find in the letter of the Manchester Committee the following suggestion:—"That Fellows of the College practising midwifery shall be eligible to the Council, but that fellows engaged in the practice of pharmacy shall be thereby disqualified." The Committee state what we believe to be the fact, that this is one of the provisions of the new charter which would be generally acceptable to the profession. The greater number of fellows, and even the members of Council, practise medicine as well as surgery; and we do not see why, if a man has worked his way to the fellowship of the College, he should be excluded from becoming a member of Council, because he happens to have a practical knowledge of medicine and midwifery. In Scotland and in Ireland, we believe, it is the practice to exclude from the *fellowship* of the respective Colleges of surgeons those only who practise pharmacy. Practitioners in medicine and midwifery are admitted, and enjoy all the privileges of other fellows; and, until some declaration to the contrary be authoritatively published, we shall assume that the English College intends no other restriction by the 4th article of its reply than that which has been for years carried out by the Scotch and Irish Colleges. There is, however, one difference: owing to some laxity in the rules of admission, as we have lately had occasion to point out, practitioners in pharmacy, and even the keepers of open shops, are not excluded from the *fellowship* of the English College by examination. Hence all who take a fair view of this question, and who do not desire to degrade the Council of the

Royal College of Surgeons to the level of a committee of shopkeepers, will agree with us that some stronger restrictions are required for the admission to membership of Council, than those which have been hitherto applied to the fellowship, although the sooner the latter is dis severed from its shop-keeping alliance the better.* We shall probably have this restriction placed before the profession as an unbearable grievance; but in following in the steps of the Scotch and Irish Colleges in this particular, the English College can afford to treat all such complaints as unworthy of serious notice. The principle of giving to practitioners in pharmacy the right of a seat at the Council of the College of Surgeons, would be about as reasonable as to elect surgeons to the vacant seats in the Council of the Pharmaceutical Society. The objects for which the College of Surgeons was founded would be completely subverted by such a scheme. We do not think the question materially affected by restricting the number so admitted: the principle is wholly objectionable, and the English College is wisely imitating the example set in the sister countries, by meeting the demand with a stern refusal. The title of Member of the College of Surgeons now

* In the reply of the College to the National Association, March 1845 (MEDICAL GAZETTE, vol. xxxv. p. 907) it is put as a query in reference to the general admission to the fellowship:—"Would they (the Association) include the retail shopkeepers, who expose for sale cattle drugs and perfumery? Would they finally include or exclude all those who keep open shops, and who, though ill sustaining a professional character, are yet not chargeable with any moral disqualification?" It is unfortunate for the College, and completely subversive of their argument, that their own rules have not sufficed to prevent such persons from obtaining the fellowship by examination. This should be amended in the new charter; and *that* which disqualifies a person from becoming a candidate, should also disqualify one who is a fellow from holding the fellowship. The English College is far more liberal than the Irish and Scotch Colleges in admitting as fellows, practitioners in pharmacy; but this is not sufficient. A demand is now made to admit them to the highest honours in the College, and to give them a governing voice in the management of its affairs.

carries some weight with it: under the proposed scheme it would lose this; for when the small end of the wedge was once inserted, nothing, we believe, would prevent the College from sinking into a more respectable kind of Apothecaries' Hall.

The third point, still quite distinct from the other two, relates to the proposed incorporation of a new College of General Practitioners. Here, again, the reply of the College has no pretence to novelty, although it appears to have suddenly produced a large amount of invisible excitement. In the answer returned to the Association on the 3d April, 1845, we find the following statement:—

"Lastly, with regard to the proposed incorporation of the general practitioners as a separate body or college, the Council have as little the wish as the power to prevent them from obtaining a charter, and would offer no objection to the incorporation of a body for the performance of the functions hitherto executed by the Society of Apothecaries; but, actuated as the Council are by the desire of promoting the usefulness and respectability of the general practitioners, they dare not, consistently with their sense of duty to the profession, and with their regard for the interests of the general practitioners themselves, hold out any hope of co-operation with the National Association in a plan for instituting a corporation which would supersede the defined and recognised functions of the existing College of Surgeons."*

The College have been politely invited to become *functi officio*, and they have declined the invitation. We see no objection to the institution of a College of General Practitioners, in which all who are dissatisfied with the rules and regulations of the College of Surgeons may at once enrol themselves. We think such an institution, by having engrafted upon it some improvements now admitted to be neces-

sary in the constitution of the Apothecaries' Society, would be of benefit to the profession; but, at the same time, it is not to be expected that any minister would consent to transfer the examinations in *Surgery* from the Royal College of Surgeons to the new and untried members of the College of General Practitioners. What guarantee of competency would there be either to the public or profession by such a proceeding? No member of the Court of Examiners or Council, and no Fellow of the College of Surgeons, would put down his F.R.C.S. to become an F.R.C.G.P.; and yet, without enlisting some renegades, the new College would not have even the elements for conducting an average examination in surgery. Thus, then, the new College must leave the functions of the old College untouched. No case has yet been made out for the abolition of the Royal College of Surgeons either by charter or Act of Parliament; and until it can be made clear to our legislators that the examinations at this College are inefficient, that its diplomas are waste paper, and are not voluntarily sought by nine-tenths of those who practise their profession, any attempt to convert it into a College of Apothecaries must necessarily fail.

We have now examined the three points on which, as we are told, the whole profession of medicine in this country has been "plunged into an abyss of angry and violent agitation."

A contemporary states that "the banners of the conflicting parties are thus inscribed.

"The proclamation by the Council stands as follows:—

"You, the surgeons of England, members of this College, shall for ever be excluded from seats at the Council Board of this Institution, and you shall not raise up a College of your own."

It surely can work nothing but evil

* MEDICAL GAZETTE, vol. XXV. p. 508.

to the profession and to the cause of sound medical legislation—the term “reform” has become a mockery, a delusion, and a snare—so to misrepresent published statements. The only hope of a corrective for such mischievous announcements is, that the “surgeons of England” base their judgment upon what is really published by the College, and not upon such an unfair version of their views as that which we have above quoted. The Council of the College refuse to admit to seats at their Board those who are engaged in “general practice” or who practise “pharmacy:” the friendly opponent of the College interprets this as a *perpetual exclusion* of the *Surgeons of England, Members of the College, &c.* Why not have put the case in this way?—“Surgeons of England, look at the liberality of your College. It admits to the Fellowship persons who are engaged in general practice, even those who keep open shops, while the Colleges of Ireland and Scotland most unjustly exclude them! The English College, it is true, denies the right of a seat in the Council; but the Irish and Scotch Colleges not only deny this, but even admission to the Fellowship.” Why has not the profession of medicine in Ireland and Scotland been long since plunged into “an abyss of angry and violent agitation?” Is it that medical practitioners in these countries are less excitable or more reasonable than their English brethren? Or is it that the violent agitation in England is really confined to some two or three hundred practitioners? It is, after all, but a sentimental grievance; for there are not more than *twenty-four* seats at the Council Board, while there are no fewer, it is said, than *thirteen thousand* belligerents each of whom is looking after his chance of obtaining one. We will leave our readers to calculate the value of that chance even if the Council had

conceded all that the Institute has asked. Is it seriously a subject for angry declamation and bitter hostility? We think not; and so, we believe, the good sense of the profession will ultimately decide.

Again, the Council have not said—“You shall not raise up a College of your own:” they have merely declared, in as polite terms as the case would admit, “You shall not overthrow the College of Surgeons.” We cannot blame them for standing upon their defence, and in this resolution we think they will be largely supported by the profession. We shall only alter our opinion when we find petitions for the total abolition of the College presented to the Legislature, and signed by some of the many thousand members who are said to feel aggrieved by these proceedings. The Parliamentary trick of presenting solitary petitions with one or two signatures will count for nothing.

PROGRESS OF MEDICAL REFORM.

THE delegates appointed by a conference of medical men from various parts of the kingdom, on the subject of medical reform, had an interview with Sir George Grey on Monday last, at the Home Office. The deputation consisted of Nathaniel Clifton (chairman), Islington; Thomas Martin, Reigate; George Bottomley, Croydon; John Bowling, Hammersmith; Farnham Flower, Chilcompton, Somerset; Richard Southey, Cambridge; John Probert, New Cavendish Street; James Bird, Orchard Street; George James Squibb, Orchard Street; George Webster, Dulwich; P. Hood, Lower Seymour Street; Henry Ansell, Norfolk Crescent; Thomas H. Smith, St. Mary Cray, Kent.

It is understood that the object of the conference was to ascertain the views of the Home Minister respecting the incorporation of a new College of General Practitioners.

Reviews.

Die Erkenntniss und Heilung der Oehrenkrankheiten. Vom Dr. WILHELM KRAMER, Königl. Preuss. Sanitäts-Rathe. 8vo. pp. 871. Berlin: Nicolai. 1849.

The Diagnosis and Treatment of Diseases of the Ear. By Dr. W. KRAMER. 2d edit. 1849.

DR. KRAMER became known to English practitioners by his work entitled, "Beiträge zur Oehrenheilkunde," or "Contributions to Aural Medicine;" in our review of which (vol. iii. p. 168) we there pronounced it to be a very valuable addition to the few good and practical works which exist on the subject of which it treats. The present volume incorporates also with the preceding the substance of the author's work on the "Nature and Treatment of Diseases of the Ear," which was translated, in 1837, by Dr. J. R. Bennett. The latest fruits of the author's labours and observations are, at the same time, set before his readers.

The contents of this volume are divided into two sections: the first comprises general observations on aural medicine; the requisite qualifications of the practitioner of aural medicine; an historical sketch of its literature; its foundation; references to the anatomy and physiology of the organs of hearing; general symptoms of their diseases, their causes and course, and their general treatment.

In considering the last subject, the author remarks, with regard to the employment of electricity in the treatment of the diseases of the ear, that in all the accounts, without exception, which he has met with of its beneficial effects, there is to be seen the one great omission of the precise pathological condition in which it had been used. That the cases have almost all been included under the indefinite terms, "deafness," "hardness of hearing," "ear-ache," "tinnitus aurium," &c. Hence, on account of this inaccuracy of observation, the said accounts are valueless for any scientific purposes.

In reference to electro-magnetism, the author states the following as the only conclusions which experience yet warrants.

That the auditory nerves may be

excited to the highest degree if included in the galvanic circle; that the application of the galvanic current must be continuous, otherwise the deafness, &c., returns. The author thinks that the employment of galvanism in these diseases has yielded but negative results, and that it is applicable only in cases of nervous deafness.

Counter-irritants, the author states, have often been mischievously employed, by their inducing a degree of debility through the profuseness of discharge which they cause.

Dr. Kramer regards syringing the ears as useless, unless employed for the removal of hardened wax, or foreign bodies, from the external meatus. Stimulating injections do harm, by exciting inflammation.

In speaking of the general treatment of these cases, the author quotes from the printed report of a certain "aurist" in London, that from 140 to 180 cases *per diem* had been treated, of course with the greatest success, and justly remarks that but indifferent attention could have been given in less than five minutes to each case. Such gross exaggeration—"grosse Uebertreibung"—must not, however, be taken as the standard of aural medicine in England! Its English name is quackery.

The second section of the work treats of the particular diseases of the ear under the following classification:—

1. Diseases of the external ears.

a. Of the cartilages; *β.* Of the external meatus; *γ.* Of the membrana tympani.

2. Diseases of the middle ear.

a. Of the mucous membrane; *β.* Excitement of the sensitive nerves: *otalgia.*

3. Diseases of the internal ear.

a. Acute inflammation of the labyrinth; *β.* Nervous deafness; *γ.* Tinnitus aurium; *δ.* Deaf-dumbness; *ε.* Acute inflammation of the facial nerve; *ζ.* Tubercle of the petrous bone.

4. Disease developed within the cranium destroying the integrity of the auditory nerve.

5. Ear-trumpets, &c.

We have not space for an extended consideration of the volume. We may observe, that the several subjects are accompanied by the recital of cases, the details of which illustrate the points under consideration. The volume also contains plates of the air-press, speculum, catheters, &c. employed by the

author. The entire work constitutes a very complete treatise on diseases of the ear, and, while it is worthy of, will add to the author's renown, which is sufficient to render further eulogium on our part unnecessary.

Proceedings of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, Feb. 26, 1850.

DR. ADDISON, PRESIDENT.

On the Proximate Cause of Albuminous Urine and Dropsy, and on the Pathology of Renal Bloodvessels in Bright's Disease. By GEORGE JOHNSON, M.D., Assistant-Physician to King's College Hospital.

THE author commenced by an allusion to his two previous communications, published in the Society's Transactions, in which attention had been directed chiefly to morbid changes occurring in the *secreting cells* of the kidney. He had now to describe a remarkable morbid condition of the renal bloodvessels, and to suggest an explanation of two of the most common and important symptoms of diseased kidney, viz. albuminous urine and dropsy. In accordance with Henle's description of the arterial tunics, he had observed that the renal arteries contain two layers of muscular fibres, the inner being longitudinal and the outer circular. In all cases of chronic renal disease, with greater or less destruction of the secreting cells and tubules, the author had observed great hypertrophy of the arterial walls, the canal of the vessels remaining pervious, and of the normal size, until the extreme stage of the disease, when an accumulation of oil-globules frequently occurs within them. The Malpighian capillaries, in the same cases, are also much thickened, but present no appearance of muscular fibre: in the last stages oil-globules are occasionally seen within or upon them. The inter-tubular capillaries and the veins present no appearance of thickening. The author referred to Dr. Reid's observations on the phenomena of asphyxia, and to Dr. Wilson's, on the capillary circulation, and its dependence on the vital attraction exerted upon the blood by the processes of nutrition and secretion. The escape of serum from the Malpighian capillaries, and its consequent mixture with the urine, and the serous effusion into the areolar tissue and the serous cavities, re-

sult from impeded capillary circulation, consequent on the retention of urinary excrementitious matters in the blood; the obstruction being analogous to that which Dr. Reid proved to exist during the process of asphyxia. The obstruction occurs in the inter-tubular capillaries of the kidney, and is the cause of the remarkable hypertrophy of the Malpighian capillaries, and of the arterial tunics. The obstruction in the systemic capillaries would account for the hypertrophy of the left ventricle of the heart, so frequently observed in cases of chronic renal dropsy, without manifest disease of the valves, or of the vessels. The author then referred to some pathological phenomena, probably connected with capillary circulation, and in this respect analogous to those before mentioned, *e. g.* serous effusion into the pulmonary cells in slow asphyxia, hypertrophy of the right ventricle of the heart in cases of chronic asthma, sudden death from the entrance of air into the veins, and the frequent connection of cerebral hæmorrhage with renal disease.

PATHOLOGICAL SOCIETY OF LONDON.

DR. LATHAM, PRESIDENT.

February 4, 1850.

MR. NATHANIEL WARD exhibited for Mr. Adams,

A cast of a Dislocation of the Cuboid and Navicular Bones, from the Os Calcis and Astragalus.

The foot presented a remarkably twisted appearance, the anterior part being directed considerably inwards, and the inner edge somewhat elevated (a line drawn forwards from the internal malleolus left the three inner toes to its inside); its longitudinal axis was diminished to the extent of an inch on the dorsum; above, and to the outside, was a superficial transverse depression, surmounted by two eminences, the one above the other, nearly on the same line, the lower sharper and smaller than the upper one, but about one-eighth of an inch back. These eminences were the anterior extremities of the astragalus and the os calcis. The external malleolus was very prominent, and a considerable depression above it indicated that it had been fractured. The accident occurred about a year ago from a wall falling on the lower extremity. Every means were taken to remedy the deformity, without effect. The muscles of the calf became much atrophied, and there was the greatest difficulty in progression.

February 18, 1850.

Dr. BENGE JONES exhibited

A Duodenum and Stomach, in which Sulphate of Zinc was found.

John W., above 30 years old, had been a drunkard for years, and on a previous occasion had attempted to destroy his life. He had been in the habit of "doctoring" himself, and often took tincture of opium. Sulphate of zinc he also used for his eyes, and some time previous to his death he remarked to a person who saw the sulphate of zinc, that "there was enough to poison half a hundred men." The night before his death he was excited, tremulous, and delirious: about 11 P.M., after taking some brandy and water, he was sick. The following morning about ten o'clock his bedroom door was obliged to be broken open, and he was found with his throat cut. He was violent, and would not allow the medical man who had arrived to dress the wound: the wound appeared dry, as if it had been made some time, and not more than half a pint of blood was lost. He had a very light relaxed motion before taken to St. George's Hospital. He died before he got there, at a quarter to eleven A.M., Feb. 10th, 1850.

Examination.—Body stout and well-made. The integuments, platysma myoides, the anterior belly of the right digastric, were divided by incision. There were two smaller incisions on each side of the neck, below the former, which scarcely went through the integuments. No large vessel was injured. Brain and vessels highly congested. Pleural surfaces dry. Lungs much congested, but healthy. The pericardium presented nothing remarkable. Left ventricle was contracted; the other cavities contained dark fluid blood. Blood throughout the body fluid.

The lining membrane of the mouth and fauces presented a whitish appearance. The tongue was white and shrivelled: the mucous membrane of the epiglottis, pharynx, and œsophagus slightly congested, and at the middle and lower part of the œsophagus there were some small irregular patches, of a greyish-white colour, which could not be scraped off: the stomach was contracted, and contained about an ounce of whey-like fluid; the whole of its inner surface was of a nearly uniform dirty grey colour; the mucous membrane was thickened, and looked like tripe. On scraping up the muddy covering, slight vascularity, with condensation and induration, was found.

The lining membrane of the small intestine was very vascular, and in the duodenum and upper part of the jejunum of the same grey colour and altered texture as the inner surface of the stomach, but in a

much less degree. The colon and rectum were unusually contracted, and their inner surface smeared over with a white curdy substance, but the coats of the bowel were healthy. The canal was completely empty of feces. The omentum and mesentery were loaded with fat.

Kidneys congested. Bladder contracted. Other organs natural.

The appearance of the stomach indicated some liquid poison. Dr. Bence Jones stated that he had never seen anything like this from corrosive sublimate or oxalic acid.

Two days after his death, in the room where the man slept, two drinking vessels were found empty of fluid, but containing some crystalline substance, which had been in solution in the vessels. It proved to be sulphate of zinc; and on examining the contents of the stomach sulphuric acid and zinc were detected.

The thickening of the stomach looked too much and too extensive to be the result of a single poisonous dose of sulphate of zinc. Possibly, on the stomach, as on the throat, he had made more than one attempt to destroy his life.

Mr. AVERY exhibited specimens of
Extensive Necrosis of the Bones of both Legs after Severe Injury,

taken from a man, set. 50, admitted into the Charing Cross Hospital 25th of Sept. 1849, and died on the 15th Jan. 1850.

A cabman, while driving, was kicked by his horse on both shins at the same moment. The bones of both were fractured, and comminuted at the union of the middle with the lower thirds, and the tibiae exposed to the extent of two inches. Several small pieces were extracted from the wound. The soft parts, excepting at the wound, were comparatively uninjured. Taking all circumstances into consideration, it was thought advisable not to amputate the legs. He had three severe attacks of delirium tremens at the early part of the treatment, combated by opium. In the course of three or four weeks the condition of the limbs was very favourable. There had been very little inflammation of the soft parts generally, and that which existed seemed concentrated about the bones. Small, exquisitely painful swellings formed from time to time up the line of the tibiae, and required frequent openings: the openings remained discharging, and led to exposed bone. By the third month great hopes were entertained that the necrosed bone might be superficial. The condition of the soft parts and the position of the limbs was most satisfactory. When his pulse began to quicken his appetite failed, and he gradually became weaker, without any unfavourable change in the limbs. He

died nearly four months after the injury. On examination, no union had taken place. A longitudinal section of the right, and a transverse one of the left tibia, show that the cortical part of the bone is necrosed to the extent of three or four inches, and that new formed bone, two lines in thickness, around this, encloses the dead part between it and the medullary portion still living and attached to a part of the cortical substance, which had retained its vitality. New bony matter had been thrown out into the medullary canal, and so close was the contact of the external case of new bone, and the hardened medullary portion, that there only remained a passage less than a line in width, through which the cortical necrosed bone at the posterior aspect of the tibia could have possibly made its escape. His organs were healthy. No purulent deposits were discovered.

Mr. SOLLY presented a specimen of
Fibrous Tumor, connected, and removed with the Superior Maxilla,

in a lad, æt. 17. The wound healed rapidly, with little alteration in the features; and a small aperture left in the palate was closed by a silver plate when he left the hospital. It was a good specimen of the non-malignant osteo-sarcoma: a thin section showed its texture very clearly. The operation was performed four years ago, and there has not been any return of the disease.

Also, an

Enchondromatous Tumor,
removed from over the parotid gland, which was embedded in the gland, but distinct from it; the parotid was quite healthy.

Also, a

Bladder and Kidneys,
with the following history:—J. N., aged 66, under Mr. Solly's care; had the usual symptoms of stone. On first sounding him the sound passed over some calcareous matter: but this was in the prostatic portion of the urethra, and felt soft and unresisting; the point of the sound came in contact with a substance which was first, from its resistance, supposed to be a stone, but did not ring like a solid calculus. He was again sounded several times, and pronounced free from stone in the bladder. The man sank gradually. In the bladder there was a beautiful specimen of fungoid tumor, and two or three small scales, about the size of pins, of scirrhous tubercle. The ureters and pelvis of kidneys were in a state of chronic inflammation; the left being nearly absorbed, and containing many serous cysts, and a good deal of calcareous deposit. Mr. Solly said that cases

of this kind were sometimes operated on, and no stone discovered.

Mr. SHAW exhibited a specimen of
Cancerous Ulceration of the Tongue, Soft Palate, and Arches,

removed from a man, æt. 67, admitted into the Middlesex Hospital in November last, and who died February 15th. The disease had existed between three and four months previous to his admission. There was an ulcer on the left side of the tongue, near the root, and part of another, about the size of a shilling, was visible in the centre of the soft palate; but owing to the hardness of the tissues at the root of the tongue, and the adhesions to the surrounding parts, the tongue could not be depressed so as to bring the whole of the ulcer into view. The margins, so far as they could be seen, were circular, raised, and rugged, and the surface warty and irregular. In a short time the glands under the jaw, on the left side, became enlarged, scirrhous, and fixed to the adjacent parts; and while that was taking place the root of the tongue was thrust upwards towards the palate. His chief sufferings arose from difficulty of deglutition; and when he had slight cold, from dyspnoea. The treatment was chiefly palliative. Although by careful attention to the articles of his diet he was able to take a good deal of nourishment, he gradually wasted, and, without any prominent symptoms, died tranquilly. On examination, the ulcer of the tongue presented a deep indentation, with some appearance of cicatrization in the hardened parts around it: the ulceration extended to both sides of the isthmus of the fauces; it had destroyed the uvula, and part of the anterior surface of the velum palati: on the posterior part the surface was covered, as well as the posterior arches, with numerous prominent warty excrescences. All the viscera were sound. Mr. Shaw adverted shortly to a case recently under his care, where there was the same elevation and immobility of the tongue noticed in the foregoing case. The patient was a lad, deaf and dumb, who had cancerous ulceration of the tongue. A month before his death the lymphatic glands under the jaw became so much enlarged that the point of the tongue was protruded more than an inch between his teeth, without power to retract it: ulceration and sloughing from the pressure of the teeth took place, and he lingered for above a week, a miserable spectacle, in that condition. In this case, also, all the viscera were sound.

Mr. ERICHSEN presented a
Tumor removed from the Brain, producing Amnesia.

A woman, æt. 37, in good health, com-

plained of defective sight in Oct. 1846. This commenced about a year ago, during pregnancy; she was suckling her infant. Of spare habit, rather tall, and florid complexion. Eyes large and prominent, not hard nor tender; pupils rather contracted, the iris active, and sclerotic clear. No symptom of cerebral congestion. Some degree of exhaustion from suckling, and over exercise of the organs in needle-work, were the only apparent causes for the symptoms. The left eye was weakest, and failed first. The infant was weaned, and tonics were prescribed, with counter-irritation and alterative doses of mercury, but sight became gradually worse. In May 1847, Mr. Dalrymple saw her, and referred the symptoms to anæmia, and prescribed the ammoniated iron, with counter-irritation. In September she was admitted into Charing Cross Hospital, when the same treatment was tried, without benefit: was now quite blind; she expressed herself, however, as not in absolute darkness, but seeing a yellowish light, as if the sun were shining. Had never complained of muscæ. Pressure on the globes caused no appearance of coloured spectra, as in the healthy eye. She became eccentric and childish; for several months sense of taste and smell was lost, and then returned. Dec. 5th, 1849, she became lethargic for three days, and then recovered herself, though much weaker. In January the lethargic state returned. The pupils were contracted and insensible: she died in twenty-four hours after this.

Examination.—The surface of the brain presented nothing remarkable. The olfactory lobes appeared small. Some difficulty was experienced in separating the brain from the middle fossa of the skull on the left side, and a tumor was found in the middle lobe closely adherent to the parts round the left optic foramen. It was embedded in the anterior portion of the middle lobe, at its angle, and so placed as to press on the left optic nerve, behind the optic commissure, and again at its entrance into the optic foramen. On slicing away the upper part of the left hemisphere, the tumor was seen projecting through the floor of the lateral ventricle, where it is formed by the corpus striatum: the greater part of the corpus striatum had been removed by absorption. About two drachms of bloody serum was found in each lateral ventricle. The tumor was easily turned out from its connections, and the cerebral substance was much softened in its vicinity. The tumor weighed two and a half ounces. A thin slice from the interior of the tumor, under the microscope, presented several varicose nerve-tubes, besides the fibrous structure and cells characteristic of encephaloid cancer.

Also,

1. *A Fracture of lower end of Radius, exhibiting impaction of the upper into the lower fragment.*

It occurred in a woman, æt. 52, who fell on the palm of the left hand. She died of delirium tremens twelve days after the injury. The fracture is transverse, and about one inch above the extremity of the styloid process. The upper fragment is drawn into the lower to the depth of more than half an inch, being firmly impacted. The posterior aspect of the lower fragment is broken off into two small scale-like pieces, leaving the carpal articulating surface entire. The pronator quadratus was, to a great extent, attached to the lower fragment, as was the supinator longus.

The dorsal prominence, which was not so distinctly marked as usual, was occasioned by the two splinters of the lower fragment being forced up by the impacted end of the upper fragment. There was no displacement of the carpal articulating surface of the radius. The ulnar and radio-ulnar ligaments were entire.

2. *A Tumor of a doubtful character, removed from the breast of a woman, aged 42.*

It had been growing six months; was hard and nodulated. Patient perfectly healthy.

On section it presented a clear grey semitransparent aspect, apparently composed of longitudinal fibrous matter.

Under microscope.—Elongated cells in large quantities, and some round nucleal cells, but no compound ones.

3. *Also the Femur of a Cow that had been fractured some months before.*

There was an enormous mass of callus around the broken fragments. This case was forwarded to London by Mr. Williams, of Cirencester.

4. *Also a case of Bony Anchylosis of the Knee.*

The disease of the joint first appeared twelve years ago, when abscess and sinuses formed. These continued discharging profusely, and accompanied by hectic. The limb was removed by Mr. Brookes, of Cheltenham. There is true bony ankylosis between the inner condyle and corresponding head of tibia. There is worm-eaten caries of the head of tibia and lower end of femur.

Mr. PARTRIDGE showed a

Small false Aneurism of the Root of the Aorta, which had burst into the Pericardium.

A man, æt. 41, was taken to King's College Hospital quite dead. For some time before

his death, which occurred suddenly, he had been subject to great privations in food and lodging. The aneurism was circular in form, and about half an inch in diameter. It was situated in that aortic pouch which gives origin to the right coronary artery. It did not, however, involve that vessel, but was placed rather behind it. The aneurism was a false one, the inner and middle coat of the artery having given way; and it had burst into the cavity of the pericardium by a small aperture just above the tip of the right auricle, and to the right side of the pulmonary artery.

The coats of the aorta presented abundant fatty (atheromatous) deposits. The pericardium was distended with blood; and the heart itself (which was quite healthy) was much compressed.

Also some specimens of scrofulous disease of the vertebrae; but, as some of the members intended bringing forward similar cases at the next meeting, the particulars of these specimens, and the remarks on them, are deferred until the next report, at the request of Mr. Partridge.

Mr. WM. ADAMS related a

Case in which Pus was found in the Thoracic Duct; with Suppuration of Lymphatic Glands.

A man, æt. 40, admitted into St. Thomas's Hospital, under Mr. Green, Feb. 5th, 1850, with a large hydrocele, complained of fatigue, but did not appear feeble. In the evening pain in the abdomen and the hydrocele was complained of. His behaviour was strange. Rather talkative, and inclined to be impudent. He was not feverish: bowels not opened for several days. An aperient was given. He was sleepless and thirsty.

On the 6th, tongue brown and dry; was very feverish; bowels not opened; wandered slightly at times. Erythematous inflammation of the skin appeared on the back of the right hand and arm, and also on the left arm. During the day the hand became blue. He was very tremulous, but fed himself. Death took place at 10 P.M.

The cause of the disease is obscure, unless it be considered that the inflammatory enlargement of the lymphatic glands in the left groin, pelvis, and on the vertebral column, depended upon the irritation of a hydrocele occurring in an enfeebled constitution. The case particularly illustrates the direct poisonous influence of pus when received into the current of the blood, and the tendency, under these circumstances, to gangrenous inflammation, in the incipient stage of which this patient died.

Examination.—Both arms and left

oedematous; right arm and left thigh dark and mottled; and, on the same arm and thigh, large vesicles, containing coloured serum. Brain healthy. Lungs distended; more especially congested at posterior parts; the structure in congested portion was softened, and sections of it presented a greenish black colour, with a gangrenous odour. Peritoneum congested in patches. On omentum and parts of the intestines there were a few small flakes of recent lymph; its cavity contained about a pint of turbid serum, containing small flakes of recent lymph. A mass of enlarged lymphatic glands at the upper edge of the pancreas was softened in structure, congested, and infiltrated with pus. The thoracic duct was found dilated, and filled with thick white pus. Pressure on the enlarged glands caused the flow of pus into the duct through a lymphatic passing directly into it from the mass of glands. The glands in the lumbar regions, and the course of the iliac arteries, were enlarged and suppurating; glands in the groin merely enlarged. The cyst of the hydrocele contained about a pint of serum. Loose in this was a globular cartilaginous body, a quarter of an inch in diameter; on section, resembling articular cartilage, with a nucleus of earthy matter.

Mr. POLLOCK presented a unique case of *Fracture of the Carpal Articulating Portions of both Radial Bones occurring in the same person.*

A man, æt. 36, was admitted into St. George's Hospital, under Mr. Cæsar Hawkins, having fallen some twenty feet from a scaffolding. He stated that he first touched the ground with the palms of his hands, the wrists receiving the first concussion. He was otherwise seriously injured; and died three months after the accident, from the effects of an abscess, apparently connected with ruptured spleen and diaphragm, the result of the fall.

The fractured bones show in a remarkable manner how equally the force was received by the carpal extremities of each radius; for there is so little difference between the fractures of the right and left radius that a description of one suffices for both.

The carpal articulating surfaces were broken into several pieces. The fragments connected with the styloid process and the anterior edge of the articulating surface of each radius, were larger, and involved more of the shaft of the bone than those forming the posterior portion. The articular cartilage covering the surface of these several pieces is not at all destroyed, nor apparently injured; but, from the fissures fractured portions, are ridges

of new bone, projecting on a higher level than the cartilage, and producing a rough uneven articular plane, for the reception of the carpal bones. The aspect of this plane is somewhat forward and downwards in both bones. The comminution of the bones is limited to the carpal extremities, extending to the depth of about half an inch above the articular surface. The several fragments are retained together by deposit of new bone, each in its relative position, though apposition is not perfect; and the only other point to be noticed is the displacement of the fragments *en masse* slightly forwards, so that they present a ridge projecting in front on a plane anterior to the anterior surface of the upper portion of the radius.

Considering the number of fragments, very good union and reparation has taken place, without fear of imperfect or impaired motion had the patient survived; though, from the slight displacement of *all the fragments together* forwards, the lower extremities of both bones appeared somewhat larger than natural, and disfigured slightly the appearance of the wrists.

Mr. Pollock considered these specimens of great practical interest. In the first place, surgeons seldom had opportunities of examining fractures of the radius after death, especially when partial reparation had taken place. The specimens pointed out in a marked manner that, beyond partial rest to the fractured bones and wrist-joints, nothing could be done by external means of treatment. Extension of the hand was not required, as in many instances of fracture of the lower ends of these bones; and a very considerable time must elapse before perfect motion of the joint would be established, in consequence of the articulating surfaces being so comminuted, and remaining uneven for a long period, but that ultimately there was every reason to expect perfect motion, and very little or no deformity.

Mr. SOLLY said he considered these specimens of very great interest. He had lately been required to give evidence in an action brought by a patient against a medical man for malpractice. The case was one of fractured radius, resembling these specimens, the patient having been dissatisfied with the treatment and recovery. He felt convinced that, if these specimens had been placed in the hands of the jury, they would have at once understood the nature of the accident, and how much was requisite to repair the injury, independent of all treatment. Mr. Solly expressed a wish that the members of the Society would produce all the specimens of fractured radial bones they might possess.

ACADEMY OF MEDICINE, PARIS.

Feb. 19, 1860.

PRESIDENT, M. BICHATRAU.

Diabetes in the Lower Animals.

M. LEBLANC, *Médecin Vétérinaire*, reported the case of a dog, six or seven years old, which had been fed upon raw beef all its life, in which *Diabetes Mellitus* had appeared. M. Leblanc also related the particulars of a case of lesion of the muscles of the fore-leg simulating fracture of the humerus in a horse.

Crises in Malignant Fever.

M. LONGEY (of Rambervilliers) transmitted a work in which he described certain critical discharges occurring in fevers, and not noticed by authors—viz. mucous discharges from the urethra and vagina; ulcers on the organs of generation; cutaneous eruptions; buboes; symptoms resembling those of a venereal character, but met with in children and persons who had never had any venereal affection.

Two Fetuses united by their Sides and Abdomen.

M. BERRARD presented the fetuses in which this union had taken place. The external ends of the clavicles were joined together; the rest of the shoulders and four arms were distinct and separate; the pelvis and four lower extremities were also distinct and well formed. There was a common umbilicus, four umbilical arteries, and two veins,—the latter in some parts so closely joined as to seem to form but one vessel.

One thorax existed, which presented traces of two originally. There were two sternums, one placed rather more anteriorly than the other. They presented this peculiarity, that each was composed of two pieces, one belonging to one fetus, the second to the other. At the point of junction the posterior sternum was found to be less developed than that placed anteriorly. The ribs on the same side were also more obliquely placed than on the other side. The digestive tube was double and complete in each fetus. The spleen was wanting in the right fetus. Fusion of the liver and of the heart had taken place. The large vessels were double, except the vena cava, which at its origin was single, then divided into two large trunks. The heart was large, but had all the characters of a single organ. Four small lungs existed.

Chlorotic Character of the Functional Derangement of Pregnant Women.

M. CAZEAU read an essay, the object of which was to show that the various func-

tional derangements to which women are subject during pregnancy result from chloro-anæmia; that sanguineous plethora is very rare, serous plethora very common, in the pregnant state.

ACADEMY OF SCIENCES, PARIS.

Feb. 14, 1880.

PRESIDENT, M. DUPREY.

Application of Galvano-puncture to the Treatment of Aneurisms.

M. PETREQUIN, Professor of Medicine in the School of Medicine at Lyons, read a paper on the above subject. The author, after having pointed out the scientific conditions of the method of galvano-puncture applied to the treatment of aneurisms, and having stated the progress it has made since its origin, proceeded to detail the phenomena to which the operation gives rise.

The rigorous observation of these phenomena leads the author to a threefold division of the pathological action of the galvanic pile:—

1. An *electric* action, which excites the cerebro-spinal nervous system, enervates the patient, and subjects him to painful electro-dynamic shocks.

2. A *calorific* action, which produces a combustion of the living tissues, cauterizes, and produces eschars on those parts to which it is applied in sufficient force.

3. A *decomposing* action, which reduces and disaggregates heterogeneous bodies, and separates their elements, to be deposited in different forms.

M. Petrequin pointed out that it is to the latter action that the utility of galvano-puncture in aneurism is to be attributed. In order to obtain a cure, attention must be paid to the direction of the current. The direction must be changed without altering their nature: care must be taken that the one does not redissolve what the other has coagulated. The application must be so managed that in various directions a multitude of concretions or filaments may be produced, forming a network or tissue in the midst of the blood on which the whole shall coagulate. The entire solidification of the aneurism will then follow. The operation occupies only from twelve to twenty minutes.

Means of ascertaining the Quantity and Quality of Milk in Woman.

M. LAMPERIERRE, of Versailles, stated that he had invented an apparatus, made of caoutchouc, by which artificial lactation can be readily performed. From numerous experiments, he had determined that

from an ounce and a half to two ounces (50 to 60 grammes) is the quantity of milk secreted every two hours in the human breast. The author also stated that he had constantly found the milk alkaline; that the difference of density between normal serum and the serum of milk is an exact expression of the proportion of contained butter.

M. Lamperierre observed, that the apparatus which he had invented would be found serviceable in inflammation of the breast, by promoting the secretion of milk to the relief of the inflamed gland.

SURGICAL SOCIETY OF PARIS.

Feb. 20, 1880.

PRESIDENT, M. DREYER, *père*.

Pathological Anatomy—Remarkable Disease of the Femur.

M. GIRAUDES presented a specimen of disease of the femur, which consisted in a large osseous tumor surrounding the head of the bone, separated by fracture of the neck nine months previously. M. Giraldes regarded the case as one of morbid or abnormal callus.

Cerebral Disorder persisting several hours after the administration of Chloroform.

M. MICHOU, having administered chloroform to a patient previously to cauterizing a white swelling, found her, an hour afterwards, still in a state of insensibility, the eyes open and fixed. When pinched or pricked on any part of the body, not the slightest feeling was evinced. This state continued for three hours and a half, when it gradually disappeared, and the patient perfectly recovered. The patient had never before been the subject of any disorder of the nervous system.

OBITUARY.

On the 26th ult., at Bath, after a long and severe illness, Robert Thomas Crucefix, Esq., M.D., aged 63.

On the 27th ult., at Stratton, St. Michael's, in the county of Norfolk, Walter Carver, Esq., half-pay surgeon of the 4th Veteran Battalion, in the 75th year of his age.

In August last, wrecked on his passage from Wellington, New Zealand, to Port Victoria, Akaroa, Edward Young, Esq., surgeon, deeply lamented by his fellow colonists. The deceased was the eldest son of the Rev. William Young, late vicar of Layton, Herts.

On Feb. 24th, at Sherborne, Dorset, John Gray, Esq., surgeon, an old and much respected inhabitant of that town.

Hospital and Infirmary Reports.

ST. BARTHOLOMEW'S HOSPITAL.

Injury to the Elbow, followed by Necrosis of the Ends of the Humerus and Ulna—Excision of the Joint.

THOMAS BEST, *et.* 18, fell down, a year ago, and struck his right elbow on the ground: pain, swelling, and stiffness, to which little attention was paid, followed the injury. In three months, as the state of the joint had not improved, he attended one of the London hospitals as an out-patient, but received no material advantage. He subsequently became a patient in another hospital, where he remained three months: abscesses formed around the joint, and gave rise to copious discharge; the pain was very considerable, and rest at night was interfered with.

Jan. 12th, 1850.—Admitted into St. Bartholomew's Hospital, under Mr. Lawrence. Great swelling surrounded the joint, which was nearly motionless; and several sinuses in the neighbourhood led down to diseased bone; the pain was less severe than formerly; the general health appeared to have suffered but little; the growth of the body had been slow; the lad was thin, and of small stature.

26th.—The operation of excising the ends of the bones was commenced by two lateral incisions behind the condyles, united by a third across the olecranon, thus making the form of the letter H at the back of the joint. The thickness and swelling of the surrounding structures obscured the ulnar nerve, which had to be carefully dissected from the inner condyle, together with the parts in which it was embedded. The ends of the bones were exposed, the olecranon and head of the radius were divided by the bone forceps, the lower end of the humerus was cut through by the saw: the remainder of the articular portion of the ulna, and some rough extremities of bone, were now removed by the cutting pliers. The edges of the wound were brought together by sutures, and covered by a piece of wet lint and a bandage: the arm was placed in the bent position. Very little blood was lost; and no vessels requiring ligatures were divided. The patient remained in a tranquil sleep from chloroform during the whole operation.

Feb. 23d.—The wound, which has progressed very favourably, is in a great measure healed, and the patient has for some time been allowed to walk about: he can now hold a knife in his right hand, with which he can cut his food.

Condition of the joint.—The portions of

bone that were removed had entirely lost their natural form and appearance. The extremity of the humerus had a cavity on its anterior surface, which contained a loose piece of spongy dead bone, the size of a nutmeg: the surrounding structure was firm and dense, owing to the deposit of new bone. The end of the ulna, which was soft and easily cut, had no articular cartilage, and a small portion of the bone was dead. The radius was also soft, and its head was covered with fibrous tissue.

Fracture of the skull—Compression of the brain from blood extravasated after the accident—Employment of the trephine—Death—Examination of the body.

A stout muscular man, *et.* 74, who had been knocked down in the street by a cabriolet, and fallen with his head on the pavement, was brought to St. Bartholomew's Hospital, and admitted under Mr. Lloyd, on Jan. 30th, 1851, at half-past 11 o'clock A.M. The right side of his head was swelled from blood extravasated beneath the scalp, which, however, had not suffered any laceration; no fracture of the skull could be detected; the pupils acted when exposed to the light; the pulse was small and frequent; the breathing natural; he could not answer questions correctly; talked at times incoherently, and frequently moved his limbs in a careless and restless manner, but when taken into a ward assisted in undressing himself. After remaining in bed for about an hour the breathing became difficult and stertorous, the pupils inactive, the pulse slow and labouring, and the limbs motionless. In order to remove if possible the cause of the compression, which threatened shortly to become fatal, Mr. Lloyd cut through the swelling in the scalp over the right parietal bone, and, on removing some effused blood, discovered a fracture extending from the centre of this bone obliquely downwards and forwards; the bone was not depressed, but was denuded of its periosteum, and seemed to have suffered the most violence at the upper extremity of the fracture, and here the trephine was applied, and its application followed by the escape of a small quantity of coagulated blood. A V-shaped piece of bone was then removed from the side of the fracture by one of Hey's saws; this gave vent to a considerable portion of extravasated blood, and was immediately followed by an amelioration of the symptoms: the breathing became quiet and natural, the pulse more frequent, and some movements of the legs took place. In a few hours, however, the stertor returned, and the patient died in the course of the evening.

Post-mortem examination.—The fracture extended from the centre of the right

parietal bone across its anterior inferior angle, through the great ala of the sphenoid, and terminated at the body of that bone. There was a rupture of the dura mater corresponding to the fracture in extent and situation, but this membrane remained firmly adherent to the bone. The middle meningeal artery was torn. There was an extensive clot of blood between the dura mater and the brain, extending from the opening made by the trephine to the base of the brain. There was no blood between the dura mater and the skull. The brain was considerably lacerated beneath the centre of the right parietal bone, and to a slight extent at the base of the middle lobe of the same side.

Oblique inguinal hernia—Strangulation at the neck of the sac—Operation—Reduction effected without opening the sac—Death—Post-mortem appearances.

David Stewart, *et. 66*, a journeyman printer. Has had an oblique inguinal hernia on the left side, and has worn a truss for several years, which has generally effectually prevented its descent. For the last week he has suffered from constipation, and on the morning of Feb. 15, 1850, the bowel descended, and he was unable to return it; he was at the same time attacked with epistaxis, and lost a considerable quantity of blood: vomiting soon followed, and he went to a surgeon, who administered some castor-oil, which procured a motion. The taxis was employed frequently, but failed to reduce the rupture.

Feb. 16th, half-past one P.M., he came to St. Bartholomew's Hospital, and was admitted under Mr. Lloyd. Stercoraceous vomiting had commenced; there had been no further evacuation from the bowels, and as the rupture could not be returned, and the low and exhausted state of the patient plainly indicated that immediate surgical interference afforded the only chance of relief, an operation was quickly decided on, and was performed at half-past three; chloroform was administered, and, after the usual primary incisions, the margin of the external abdominal ring was divided without diminishing the constriction of the gut: on proceeding the structure was found to be at the neck of the sac, which was thick and unyielding, owing to some fibrous bands which surrounded and firmly adhered to it; a few delicate touches with the knife caused some of these to give way, and then a thin director was, with some difficulty, passed beneath the remainder, and their division completed: the bowel speedily returned on slight pressure being applied to the sac, which remained unopened in the wound.

17th.—He has slept at intervals, and has not vomited since the operation.

administration of an injection was followed by very slight evacuation of feces. There is tenderness on pressure in the neighbourhood of the hernial sac, and signs of commencing peritonitis. He was ordered twenty-four leeches to the abdomen, and to take calomel and opium every three hours.

This treatment was continued; twelve more leeches were applied on the following day; the patient, however, rapidly sank: the vomiting returned, and he died at 4 P.M. on Feb. 18th.

Examination of the body twenty-two hours after death.—The hernial sac, which was tough and strong, was inflamed and filled with a yellowish fluid, containing flakes of lymph. There was a small quantity of fresh lymph spread over various parts of the intestines. A portion of small intestine, about four inches long, which had formed the contents of the hernia, was of a dark colour from congestion, and had on its surface recent marks of having been embraced firmly by the stricture. On further examination it also appeared to have suffered constriction at some former period, for at one spot a portion of its wall was folded on itself and projected inwards, towards the centre of the canal, forming a transverse septum which reached half across its area, making a pouch or imperfect valve. This fold was the result of old and firm adhesions between two adjacent portions of the peritoneal coat, and although it did not extend round the entire circumference of the tube, was quite sufficient to retard considerably the passage of its contents.

An examination of the cavity of the chest was not allowed.

The following paragraph has appeared in the *Morning Herald* in reference to the subject of the above case:—

Death of the "Man-o'-War's-Man" of "BLACKWOOD."—Died on the 18th Feb., in London, aged 66 years, Mr. David Stewart, journeyman printer, and for some years in the employment of the printers of the *MEDICAL GAZETTE*. He was known in literature as the author of a most interesting and popular series of papers under the above title, descriptive of a sailor's life in the Royal Navy, which originally appeared in *Blackwood's Magazine*, and were subsequently published in a separate volume. He likewise contributed to the *Naval and Military Magazine*, besides fugitive pieces to other periodical journals. He died in poverty in St. Bartholomew's Hospital, after undergoing an operation for a most painful disease.

LONDON HOSPITAL.

Vesical Calculus in a boy: Operation of Lithotomy: WITH CLINICAL OBSERVATIONS BY MR. ADAMS.

ROBERT WHITTING, *stat.* 12 years, a labourer's son from the country, was admitted into the London Hospital, February 5th, 1860, suffering from the effects of a vesical calculus, and having also a fistulous aperture in the centre of the right groin, communicating with the bladder. His mother gives the following history of his case. He had always enjoyed excellent health up to about two years since, when, being at work in the hay-field, a man threw him down with great violence on his back. He suffered great pain across the loins immediately after, and was with difficulty enabled to walk to the farm-yard, about a quarter of a mile distant. The pain now became much increased in severity, and he was obliged to be taken to his home in a cart. The parish doctor attended him for ten weeks, during which period he was confined to his bed, and used fomentations and liniments, &c., to his back and legs. His right knee was tender, and very much swollen, and he also experienced pain and weakness in the hip, which prevented him from sleeping. After lingering in this way at home for a considerable time he was brought to the hospital, and admitted as an in-patient, under Mr. Luke; and, under the influence of suitable diet and remedies, his general health became much improved; and, at the end of three weeks, he was discharged as cured. He now remained at home for about two months, when he complained of gradually increasing pain in the groin, which appeared inflamed, and very tender on pressure. A poultice was applied, and subsequently an abscess formed, the contents of which were discharged by an ulcerated aperture; and, as the boy appeared to get weaker from the constant discharge, Mr. Luke admitted him a second time into the hospital, the fistulous aperture being situated about one inch from the spine of the pubis. His health soon began to improve under a generous diet and suitable remedies, but the sinus did not exhibit any disposition to close, until a small portion of dead bone connected with the pubis had been removed, when it soon assumed a healing aspect, and in three weeks was closed, so as to allow of his being sent again into the country, where he remained until he was brought a third time for re-admission to-day.

Soon after he got home again he first perceived a slight weeping from the groin when he passed his urine, and also expe-

rienced a pricking sensation, which was increased after the bladder was evacuated: he also had occasional paroxysms of pain during the night, and sometimes the urine was slightly tinged with blood, and the stream suddenly checked during the act of micturition, when he was compelled to exert greater expulsive efforts, which were not always capable of overcoming the difficulty. The quantity of urine voided by the abnormal aperture in the groin appears to have gradually increased with the severity of the other symptoms; so that now, in attempting to pass his urine, there is about the same quantity escapes from this channel as from the urethra. The prepuce is elongated, and his fingers moist and sodden with urine. The constitutional symptoms are become very acute. He has little sleep, being frequently obliged to jump up in an instant during the night, on account of the sudden accession of pain compelling him to attempt to pass water, which he is often not able to accomplish for several minutes, during which delay he screams violently. Immediately this spasm has subsided the water shoots out with considerable force from both apertures. Upon examination the urine is found to be neutral, having a cloud of mucus floating about in it; and, after standing a few hours, depositing a tenacious-looking sediment, slightly tinged with blood, the supernatant liquor being found to display traces of albumen when heated with heat and nitric acid. He was ordered milk diet, with half a pint of beef-tea daily; also sixteen grains of carbonate of soda three times a day, with ten drops of laudanum every night, after immersion in a hip-bath. As he was suffering considerable pain, no attempt was made to introduce a sound.

6th.—Experienced great relief from the hip-bath, having passed a better night than he has done for many weeks past; and, as the constitutional irritation under which he was labouring yesterday is much diminished, a middle-sized sound was passed, and a calculus distinctly felt, and heard to shake against the instrument, which, owing to the sudden and spasmodic evacuation of the urine, was propelled forwards by the collapsed coats to the neck of the bladder; so that, on the first impression, it appeared to be situated unusually forwards. To continue the same treatment.

10th.—Much more free from paroxysms of pain. Sleeps tolerably well at night; appetite good; and the urine is now clear and quite free from any abnormal deposit, its physical characters being the same. Is very anxious to have the stone removed, but under the influence of chloroform.

14th.—As the boy presented no unfa-

avourable symptoms to contra-indicate the operation, it was performed to-day by Mr. Adams. Chloroform having been first administered, the ordinary lateral section was made by a common scalpel, the subsequent incision through the prostate and neck of the bladder being performed with Blizard's knife. The stone was extracted in thirty-five seconds, and weighed seventy-two grains. Its chemical composition will be alluded to hereafter. Very little hæmorrhage ensued, and the boy was placed in bed with his knees tied together without having been at all sensible of pain during the operation. After recovering his consciousness he was ordered ten drops of laudanum, and to have milk diet.

15th.—Slept at times during the night, but complains very much of the water scalding him as it passes through the wound. Skin moist; and pulse natural, as to frequency and force. To have a hip-bath at night.

16th.—Has slight heat of skin, but feels very much less inconvenience from the scalding of the urine. Bowels not yet relieved since the operation. *Ol. Ricini*, 3ij.

18th.—He continues to progress favourably, the water passing freely through the wound; but the bowels have rather a sluggish action; and, as the castor oil makes him feel sick, he was ordered to take a moderate dose of calomel and rhubarb instead, at bed-time.

19th.—He was ordered half a pint of beef-tea, a mutton chop, and light pudding, daily.

20th.—To-day the urine begins to pass through the urethra, the boy experiencing a tingling sensation along the passage. Continues to gain additional strength.

24th.—The quantity of urine which escapes through the wound has gradually diminished since the last report, until now a very small quantity passes in that direction. He is beginning to show a colour in his cheeks.

26th.—To-day the whole of the urine is passed by the urethra, the edges of the wound being approximated, and the granulations florid and healthy; so that, in the course of a week, he will meet probably be discharged from the hospital.

Upon the above case, the following clinical observations were made to the surgical class by Mr. Adams:—

GENTLEMEN,—There are some circumstances in this case of a peculiar character, which call for a few observations from me. It appears that the boy had been discharged from the hospital three weeks before his last admission, without any symptoms of stone. He had previously been admitted

in consequence of an abscess in the right groin, depending on necrosis of the pubis: a portion of dead bone was removed, and the sinus soon healed: the boy leaving the hospital apparently cured. To show that all symptoms of stone were absent, it was especially remarked that during his last sojourn in the hospital he was unusually lively, and constantly romping about. Now I need not observe to you that, had any sign of stone existed at this period, it would have been at once observed by Mr. Luke. As soon, however, as he leaves the hospital, symptoms of stone supervene with considerable severity, and his mother brought him up again from the country for readmission. I had little doubt that he had a calculus in the bladder, from the symptoms already detailed to you. I should, however, remark that, finding a fistulous opening in the groin, which communicated with the bladder (through which urine dribbled), and hearing the history of the case detailed, I ventured to suggest that possibly a small piece of necrosed bone had penetrated the bladder, and had formed the nucleus of incrustation.

The symptoms having been detailed in the history of the case, I will make a few comments on them by way of explanation. Thus the first sign we meet with is a frequent desire to pass water, accompanied with pain, which is most severe during the escape of the last drops: there is also at this time a violent and painful sense of forcing perceptible in the bladder.

In some cases blood passes with the last drops of urine; in others the flow of urine stops suddenly, and after a little time more urine escapes, when it stops again, and so continues until the bladder is empty.

In some cases pain exists about the sacrum, down the thighs, and even in the ball of the great toe, but more commonly it is referred to the extremity of the penis; and hence patients, especially boys, are perpetually pulling about the prepuce, which becomes, from this constant mechanical irritation of the acid urine dribbling over it, thickened, red, and sore: this was especially so in the case before us. A sound is passed, and the calculus being felt on the instrument striking against the foreign body, all further doubt is at an end.

There are occasionally other signs of stone. Thus, in children, prolapsus ani is not unfrequently remarked. The state of the urine is not to be lost sight of: thus, although in many cases, and especially at the beginning of the disease, the urine is acid, yet as the disease advances, and as the bladder becomes inflamed or irritated, aropy mucus or muco-pus is poured out,

and escapes with the urine; and at this period, if the urine is tested, it will be found decidedly alkaline.

Let us now briefly review, and endeavour to explain, the symptoms. The frequent desire to pass water necessarily depends on the mechanical irritation of the bladder, by the constant contact of the foreign body with its mucous membrane, the muscular and mucous coats readily sympathising with each other in disease as they do in health. The pain experienced on the expulsion of the last drops of urine obviously depends on the irritation of the neck of the bladder, which is the most sensitive part of that viscus: and this exquisite sensibility is explicable on anatomical grounds; for if you dissect this part you will find a large plexus of nerves situated beneath it, which no doubt communicates high sensibility to this part of the organ.

The spasm at the end of the penis is referable to a law of what is termed nervous action, and which law is abundantly exemplified in other diseases. I mean, that when a nerve is irritated, the pain is not felt at the seat of that irritation, but at the periphery of the nerve: thus in diseases of the hip-joint we have pain about the knee; so, in *tic douloureux* depending on disease of the root of the fifth pair of nerves, the face is the seat of pain. Now in the case before us, as in stone generally, the pain at the end of the penis was present, and is to be explained by the same rule: it is, in other words, an illustration of direct or continuous sympathy, and depends on the irritation propagated along the branches of the pudic nerve.

The escape of small quantities of blood arises from the abrasion of the delicate mucous membrane of the neck of the bladder. The sudden stoppage of urine during its expulsion needs no explanation.

Now with regard to the state of the urine, its alkalinity can be easily explained by reference to the well-known chemical changes taking place in the constitution of the urine under disease or inflammation of the bladder: thus that fluid which is at first secreted acid becomes speedily alkaline, in consequence of the pouring out of a large quantity of ropy mucus; this acts as a ferment, and, decomposing the urea of the urine, causes the evolution of ammonia from it. As to the pains about the pelvis and back, together with prolapsus ani, I can only explain them by referring you to that sympathy which is propagated in the course of nerves, and hence is called continuous, and to the contiguous sympathy influencing adjacent structures. I wish you distinctly to understand that I do not profess to give a regular lecture on the cases: my object is to direct your attention to

circumstances of interest attached to such cases as you meet with in the wards of the hospital, and to endeavour to apply precepts taught elsewhere to practice; and, further, I consider these observations especially directed to the junior members of the class. Now with respect to the operation, it is an affair in young subjects of great simplicity if you are acquainted with your anatomy, and are also well acquainted with the nature, relations, &c. of the parts you have to deal with; and this you can only attain a knowledge of by dissection: you will be at no loss in the performance of the operation of lithotomy. The operation in this instance occupied thirty-five seconds: this is sufficiently short, but you are not to aim at celerity at the expense of safety. Having the patient ready, and the staff introduced, you plunge the scalpel deep into the ischio-rectal fossa: do not trouble yourself about dissecting down into this space by exposing layer after layer, but plunge your knife well in, and by one incision you will almost reach the neck of the bladder. You then open into the groove of the staff at the membranous part of the urethra. Having done this, you now select your instrument for opening the neck of the bladder. I used Blizard's knife; some use the gorget—a very safe instrument, and a very good one, because it limits the incision into the neck of the bladder, which is a point of very high importance. It is only from habit that I prefer Blizard's knife. The beak is introduced into the groove of the staff: you now take the handle of the staff in your own hands, depress it, and push forwards the beaked knife, which readily enters the neck of the bladder. You now give the staff to your assistant, and use your left forefinger for a director to guide your incision into the neck of the bladder through the prostate gland. Your incision into this part should not be of extent greater than just to admit the point of your finger. You then introduce the forceps and extract the stone.

There are two points of consequence I wish to mention, having myself experienced inconvenience from want of attention to them. The first is, that even in children in whom the distance to the bladder is greater than you may suppose, in consequence of its high position, you are apt to be deceived, and think you have reached the bladder when you really have not; and in adults and old persons this is especially likely to be the case: the source of error lies in your having entered the groove of the staff too far forwards: therefore, be certain that you are well in the bladder before you attempt to divide its neck: you will know when you have reached the bladder by the

sudden discharge of urine: the other point is, in the child especially, and of course in the adult, that you should avoid making too extensive an incision into the neck of the bladder, as in the former you may, as I once did myself, cut almost to the level of the termination of the ureters, the distance being very small at this early period. In the case alluded to, the rectum gave way from the constant dribbling of the urine over it, and rectal fistula was the consequence. Let us now examine the chemical constituents of the stone. A section having been made with a view to discover the nucleus, I am bound to say that I could find no bone. The calculus is an alternating one, lithate of ammonia constituting its centre, with an alternation of triple phosphate and lithic acid; and the outer crust, which was so soft as to crumble when laid on the table, is found by chemical examination to consist of a mixture of lithic acid and triple phosphate. This condition of the calculus is interesting, as admitting of such ready explanation. With respect to the nucleus of stones, it is a subject of much interest, as no doubt by careful examination they will often be found to consist either of foreign bodies, or shreds of lymph, or coagulated blood, around which the calcareous matter has been deposited.

A few remarks on the after treatment of this case may not be out of place. You attend to the bleeding first, but this in a child is not considerable, and will generally stop of itself; if it does not do so, you search for the bleeding vessel and tie it. I remember that when one of the former surgeons of this hospital used to cut for stone, he was always obliged to tie the perineal artery; but this arose from his cutting close to the ischium. The bleeding having ceased, you tie the thighs of the patient together, and put him to bed; give him a few drops of laudanum, and leave him with a clean napkin under his perineum, so that you may readily see if there is any bleeding, and may be able to ascertain if the water passes freely. The patient may drink toast water, or barley water, and diluents of that nature. You visit him six or eight hours after the operation, and the first thing you look to is to see whether any, and how much, urine has escaped through the wound, as the discharge of urine is a most favourable sign. You may possibly find your patient restless and uncomfortable, with a quick pulse, anxious countenance, and hot skin; and an inexperienced surgeon would imagine that peritonitis was about to supersede, especially as the belly is uneasy on pressure. Be prepared, therefore, for this, but do not imagine that it indicates inflammation; it is

probably entirely dependent on the blocking up of the wound by coagula, and consequent retention of urine: you therefore pass your finger into the wound, break the clots, and thus giving exit to the pent-up urine, the symptoms entirely and at once subside. All things now proceeding favourably, you let the bowels alone for a day or two, because you do not want to disturb the wound now beginning to suppurate. Perhaps a little castor-oil may be desirable on the third day, to obviate costiveness, which of course may become a cause of irritation to the wound. If there be no symptoms of peritonitis, do not altogether starve your patient, for recollect that he has to regain a considerable breach of parts, and requires power to effect this object: therefore, give him strong broth, or beef-tea, and light pudding, &c. In a week or ten days, sometimes earlier, sometimes later, urine will begin to flow in the natural way, the wound will heal, and the cure will be established. With regard to the causes of death after lithotomy, they may be briefly said to be twofold, namely, peritonitis, and diffuse cellular inflammation of the pelvis. The latter is the most frequent, and results from the dribbling of the urine into the cellular membrane of the pelvis after too free an incision has been made into the neck of the bladder. I refer you to a paper on this subject by Sir B. Brodie, in his work on diseases of the urinary organs.

THE GUY'S HOSPITAL BIENNIAL DINNER.

THE biennial dinner of the gentlemen connected with Guy's Hospital, and their friends, took place on Tuesday last, March 5th, at the London Tavern, John Hilton, Esq. F.R.S., in the chair. Upwards of 200 gentlemen sat down to dinner,—a larger number than has ever met before on similar occasions. Among the guests we observed Dr. Paris, President of the Royal College of Physicians; Joseph H. Green, Esq., President of the Royal College of Surgeons; Sir Benjamin Brodie, and many other leading members of the profession. On the toast "The Medical Corporations" being proposed, some over-zealous medical politicians judged it a fit opportunity to give vent to some expression of their disapprobation of the recent proceedings of the Council of the College of Surgeons. Beyond this untoward and misplaced proceeding, nothing occurred in any way to diminish the harmony or cordiality of the meeting, which was kept up to a late hour in the evening.

Medical Intelligence.

STATISTICS OF THE MEDICAL PROFESSION IN THE METROPOLIS AND PROVINCES.

In June, 1849, we made an analysis of the London Medical Directory. The numbers for the present year would, of course, differ to a slight extent, but the labour is too great to induce us to undertake a second examination, and no important good would result from it. In London and the suburbs there were 2567 practitioners; about 275 are practising as physicians, and probably about 90 who call themselves pure surgeons, but of these the greater number prescribe in all cases. The remaining 2262 (2202?) are general practitioners. Of the 2567, 1670 are members of the College of Surgeons of London (of these, 935 are members of the Apothecaries' Company also; 586 are practising with only the College of Surgeons' diploma; the remaining 199, in addition to this diploma, have taken degrees at British and Foreign Universities); 251 are licentiates of the Apothecaries' Company only; and of the remaining 281, 71 were in practice before 1815. 150 have refused to state their qualifications, and the rest (215) are variously qualified. 538 of the above have obtained degrees from British or Foreign Universities. Cambridge, 46; Oxford, 26; London, 63; Dublin, 18; Edinburgh, 171; St. Andrew's, 61; Glasgow, 39; Aberdeen, 22; Foreign Universities, 92. In our next we shall proceed with the review of the Provincial Directory.—*Dr. Edwards Cripp's London Medical Examiner*, No. 1.

We subjoin a summary from this extract.

In the summer of 1849 there were practising in London 2567 members of the profession, thus distributed:—

Physicians	275
Surgeons	90
General Practitioners	2202

Total 2567

The qualifications of these practitioners are thus arranged in numerical order:—

M.B.C.S. and L.S.A.	935
M.B.C.S.	536
Physicians and variously qualified	425
L.S.A.	251
M.B.C.S. and Brit. and For. Univ.	199
Qualification not stated	150
In practice before 1815	71

Total 2567

At the conference of the National Institute with the President of the Royal College of Surgeons on the 19th December last, Dr. Webster, of Dulwich, stated that there were in the metropolis about 400 practitioners who held the diploma of the College, and were not licensed by the Apothecaries' Society; and there were about 300 who possessed the license of the Apothecaries' Society, and had not the diploma of the College. It will be seen that this estimate does not differ materially from the numbers taken from the Medical Directory.

We have compared Dr. Cripp's list of the possessors of degrees in British and Foreign Universities with one published by Mr. Edgar Sheppard in the *Provincial Journal* for Feb. 5, and based on the Directory for 1850. The difference is not very material.

	Directory 1849.	Directory 1850.
Edinburgh	171	175
Foreign Universities	92	98
London	63	66
St. Andrew's	61	68
Cambridge	46	41
Glasgow	39	35
Oxford	26	25
Aberdeen	22	30
Dublin	18	11
		Nondescript 7

Total in 1849 . . 538 1850 . . 554

It would be a curious question to determine why *English* practitioners eager to obtain a degree, should give the preference to St. Andrew's instead of the University of London! Is it that the diploma costs less, or that the examination is less strict? When examinations are equalized, we shall not have such great inequalities as exist in the numbers of the above tables.

Mr. Sheppard has since contributed a paper to the *Provincial Journal*, from which we learn that there are in the provinces 1019 Doctors of Medicine, and 72 Bachelors of Medicine. They are thus assorted:—

Edinburgh	533
St. Andrew's	120
Foreign Universities	114
Glasgow	105
Aberdeen	68
London	58
Cambridge	57
Dublin	21
Oxford	15

Total 1091

Verily the diploma of St. Andrew's appears to have a bewitching influence.

CITY COURT OF SEWERS—THE SALARY OF THE MEDICAL OFFICER.

ON a recent occasion the commissioners assembled in considerable numbers to discuss the motion for increasing the salary of Mr. Simon, the medical officer of health of the city of London, Mr. Deputy Peacock in the chair. After speeches in support of the motion from Mr. Deputy Harrison and Mr. Deputy Eagleton, Sir Peter Laurie hoped the question would not be embarrassed by vague declamation about sanitary improvement, it being merely one only of salary, and whether the remuneration of £500 a year was sufficient for the duties required. The parochial authorities of the city of Westminster, with all the disadvantages of locality, managed that city without an officer of health. The parish of St. Marylebone, with 16,000 houses, and above 140,000 inhabitants, which more than doubles the population of the city, continued to exist in health, without an officer of health; and the public would conclude rightly, that if it were necessary to pay an officer of health so large a salary, the City Commissioners of Sewers were utterly useless. He considered that Mr. Simon's report was quite enough to give any one the cholera. He would warn the court that if they increased salaries every time they had an interesting report, their feelings would probably be harrowed up to the lamentable extent of £1000 a year. Sir Peter Laurie concluded by moving an amendment, "that the salary of the medical officer of health be £500, as at present, instead of £800 a year," which was seconded by Alderman Lawrence, and was eventually carried by a majority of 27 to 20.

KING'S COLLEGE HOSPITAL—ANNUAL REPORT.

ON the 25th ult. a general court of the governors of this hospital was held at the institution. Mr. C. F. Robinson presided. The report stated that the hospital had maintained its high character for efficiency throughout the past year, during which unusual claims had been made upon its funds by the arrangements rendered imperative by the numerous calls for assistance during the time that the cholera was raging. In that period 123 cases of cholera were admitted, and of that number 83 were restored to their families and friends. It was also gratifying to state that no case was refused admission. Notwithstanding the very limited accommodation for the out-patients, 21,948 of that class of patients had been relieved, being 1665 more than in any previous year; 1261 had been admitted to the beds, and 424 poor married women had been attended in their confinement. The committee regretted that the debt with

which the year 1849 commenced had increased, owing to the expenses of cholera cases: the deficiency now amounted to £530,—a sum which rendered the exertions of the friends and supporters of the hospital necessary to prevent its increasing. During the year the donations had increased over those of last year £107, and the subscriptions £75. The committee had the gratification of informing the governors that the prospect of possessing a hospital more suitable to the wants of the neighbourhood and the pupils attending the medical school appeared not so distant as was feared. By the generous offer of an anonymous individual, under the name of a "Friend of the Hospital," to subscribe on certain conditions £5000, a committee had been formed under the title of the "Building and Endowment Fund," and, in addition to this munificent offer, a similar sum had been contributed by the Council of King's College; these, together with several large donations, now amounted to £22,000, exclusive of the sum of £4000 and upwards collected upon a former occasion, and which sum had been expended upon the purchase of the Grange estate. It was hoped that before the expiration of many months the commencement of a portion of the new hospital would be proceeded with. It was proposed to hold a festival for the joint purposes of building and endowment, as well as support of the hospital. The Archbishop of Canterbury had consented to preside. The financial statement gave the receipts of the past year at £4512. 9s. 11d., whilst the disbursements had exceeded that sum by £148. 5s. 3d. The officers were elected immediately after the adoption of the report, and after a vote of thanks to the chairman the meeting separated.

THE LISTON TESTIMONIAL.

A MEETING of the subscribers to the fund for erecting a memorial to the late Mr. Liston, was held on Wednesday evening in Old Burlington Street. The Marquis of Anglesey presided; there were also present the Earl of Uxbridge, Lord Sydney, Drs. Grant and Forbes, Messrs. Crickson, Fergusson, Bransby Cooper, Skey, &c. The honorary secretary, Mr. George, read the report, from which it appeared that the sum subscribed towards the object in view amounted to only £750, which sum was insufficient for the erection of a statue, as originally intended; that it was therefore proposed that four marble busts of Mr. Liston should be executed—one to be placed in the Royal College of Surgeons, another in University College, London, a third in the Royal Infirmary at Edinburgh, and a fourth to be presented to the family of the deceased; and that the residue of

the money should go to pay for a gold medal, to be awarded annually by the Council of University College, London, to the best proficient in surgery. The report, and a resolution in accordance with it, were carried unanimously, and a committee to carry out the intention of the meeting, consisting of the Dukes of Beaufort and Buccleuch, the Marquis of Anglesey, Lord Kinnaid, and Count D'Orsay, formed; after which thanks were carried for the chairman, and the business terminated.

**TESTIMONIAL TO WILLIAM BUSH, ESQ.,
SENIOR SURGEON TO THE BATH EAR AND
EYE INFIRMARY, ETC.**

WE have much pleasure in stating that a very handsome silver library inkstand, bearing the following inscription, was presented to the above gentleman on Monday last, in the presence of the parochial clergy and a large number of the inhabitants of the parish of Weston, assembled for the purpose in the Infant School Room. Inscription:—"Presented to William Bush, Esq., one of the medical officers of the Bath Union, by 456 contributors, consisting chiefly of the poor of Weston, with whom the subscription originated, in grateful testimony of the kindness, skill, and unwearied attention with which he devoted himself to the service of the sick in that parish during the prevalence of cholera in the year 1849." It is gratifying to remark that the idea of presenting a testimonial to Mr. Bush emanated, in this instance, from the poor, many of whom experienced his valuable and zealous attention during the late epidemic; but the subscription was by no means confined to this class, and we have reason to know that the same feelings of respect and gratitude towards that gentleman pervade every rank of society in the parish of Weston: indeed, the kindness and skill which he displayed in his treatment of cholera patients, was such as to merit the warmest approbation of all who had an opportunity of observing the exemplary manner in which he discharged his professional duties on that trying occasion.

**ROYAL DISPENSARY FOR DISEASES OF THE
EAR.**

THE annual meeting of the patrons and governors of this institution was held on Wednesday last in Dean Street, Soho. The chair was taken by the Rev. Mr. Hale. The secretary read the report, which set forth the progress and present state of the charity, from which it appeared that relief had during the past year been afforded to a more than usual number of patients; upwards of 800 of the poorer classes had been attended to, and very beneficial re-

sults had ensued from the exertions of Mr. Harvey, the medical superintendent, and his assistants. The funds of the institution were in great want of the aid of the benevolent.

**DONATION TO THE ROYAL ORTHOPÆDIC
HOSPITAL.**

HIS MAJESTY has presented a donation of 250 guineas to the Royal Orthopædic Hospital, on the condition that His Royal Highness the Prince of Wales shall have the right of immediate admission for one patient into the Institution.

LONDON HOSPITAL.

ON Wednesday afternoon a quarterly general court of the governors of this charity was held in the board-room of the institution. Mr. J. Davis in the chair. The reports of the house committee, the minutes of the previous meetings, and the household expenditure of the hospital, having been read and confirmed, the secretary submitted the usual statement of the numbers of patients, from which it appeared that the total number admitted to the wards of the hospital since last quarter was 930, of whom there have been discharged cured 448, much relieved 395, and 87 had died. The in-patients now on the books of the hospital are 329, the out-patients, 1,796. The report acknowledged with thanks the receipt of a legacy of £500 stock in the Three per Cent. Consols, from the executors of the late Mrs. Elizabeth Duncan, and one of £100 in cash from the late Mr. C. Bell. Among the donations was one of £5. 4s. 4d. from the workmen of Messrs. Tubbut and Co., Limehouse. The receipt of this small donation was particularly gratifying to the feelings of the committee, as the whole of it had been clubbed together in sixpences and pence, and it thus testified the gratitude with which their exertions were regarded, and the estimation in which the men held the benefits which had been conferred upon some of them through the means of this charity. 320 beds are kept in constant occupation at this hospital, 220 of which are reserved entirely for cases of accidents admitted without recommendation; so that, in fact, more than two-thirds of the cases are admitted free. Some idea of the usefulness of this institution may be gathered from the fact of upwards of 59,149 cases of accidents having been received and treated there during the last eight years. The number of persons suffering from accidental injuries admitted as in-patients during the year 1849 amounted to 2,370, while the out-patients for the same period were 6,641. Of the in-patients, 2,107 were discharged cured or relieved, 99 died, and

164 remained in the hospital on the 1st of January last. The accounts for 1849 are exclusive of other cases (not being accidents), which amounted alone to 11,895, making for last year a total of 20,906 in and out-patients.

CAUTION IN MAKING POST-MORTEM INSPECTIONS, AND IN GIVING AN OPINION ON THE CAUSE OF DEATH.

ON Saturday last Mr. Wakley held an inquest at Hillingdon, on the body of William Vost. The deceased had been married on the preceding Wednesday; on returning from church he called on his son-in-law, a man named Hopkins; a quarrel ensued between them, and a fight took place; they were separated by a man named Pope, at whose house the wedding dinner was to take place, and to which the deceased accompanied Pope. Shortly after having sat down to dinner he arose suddenly from the table and left the room. Pope followed him, when he fell and expired before assistance could be obtained. It appeared that Hopkins had been taken before the magistrates on Thursday, on a charge of manslaughter, and was out on bail. The Coroner adjourned the inquest till yesterday, in order that a post-mortem examination of the body might be made, and on the re-assembling of the jury evidence was given that the brain was excessively congested, and the smaller vessels full of red blood; the death was attributable to apoplexy. At the suggestion of the Coroner, Mr. Jennings, the surgeon, made a further examination of the body, the result of which was the finding a large piece of meat completely wedged in the opening of the throat, entirely blocking up the aperture of the air-passage, and causing suffocation. The jury, after expressing their satisfaction at the exculpation of Hopkins, returned a verdict that "Death had been caused accidentally, by the lodgment in the throat of a large piece of unchewed meat." The piece of meat weighed two ounces and a half.

THE GRIEVANCES OF THE ASSISTANT-SURGEONS OF THE ROYAL NAVY.

WE are glad to see that Sir William Clay, member for the Tower Hamlets, presented a petition, on Thursday, to the House of Commons, from the physicians, surgeons, and lecturers of the London Hospital, urging redress of the grievances of the assistant-surgeons of the Royal Navy. We trust that petitions to the same effect will speedily flow in from all quarters.

ROYAL COLLEGE OF SURGEONS.

THE following gentlemen having undergone the necessary examinations for the

diploma, were admitted members of the College at the meeting of the Court of Examiners on the 1st inst.:—Messrs. Edmund Brown, Sloane Square, Chelsea—John James Ridge, Gravesend, Kent—Hugh Henshall Broughton, Preston, Lancashire—Victor Poulain de Bois Angers, Brompton, Middlesex—Alfred Taylor, Newcastle-on-Tyne, Northumberland—Robert Christopher Frost, Newcastle-on-Tyne, Northumberland—and William Hinchman Clubbee, Beccles, Suffolk. At the same meeting of the Court, Mr. George Alexander Hallion passed his examination for naval surgeon; this gentleman had previously been admitted a member of the College, his diploma bearing date April 21, 1845.

Selections from Journals.

SINGULAR MODE OF SUICIDE—EXTENSIVE DISEASE IN THE BRAIN AND SPINAL CORD FROM A WOUND IN THE NECK. BY DR. LIMAN, BERLIN.

A LAD of sixteen years of age, whose mother had manifested symptoms of puerperal insanity, had, after many unsuccessful attempts upon his own life, provided himself with a long slender-pointed instrument, like a knitting-needle, which he thrust straight into his neck, below the occipital bone, near the spine of the second vertebra, and to one side of the trapezius. As consequences of this injury there resulted an illness of several weeks' duration, the nature of which was not understood until revealed by the autopsy.

On dissection, a wound, from a quarter to half a line in diameter, was found in the spot indicated, around which were but slight traces of inflammation: a thick, yellow, inodorous fluid oozed from the orifice. A probe passed several inches into the wound without obstruction, and served as a guide for the examination of the course of the wound. It passed between the atlas and axis, piercing the dura mater; but no extension of the wound into the medulla oblongata or spinal cord could be perceived. The pia mater on the hemispheres was distended with blood; in some places the sulci between convulsions were filled by serous effusion. Both ventricles were distended with a clear yellowish fluid, about two ounces in quantity; in the base of both ventricles was about *half an ounce* of a greenish puriform fluid, which also filled the third ventricle. The cerebral substance was congested, and of normal consistence, except adjoining the ventricles, where it

was white and softened. In the base of the skull were a few ounces of sero-purulent effusion. The cerebellum and medulla were covered with fibrinous exudation. On opening the spinal canal, the dura mater down to the cauda equina was seen to be reddened and filled with effusion; the arachnoid was covered with the green fibrinous exudation, especially on the posterior aspect of the cord: when removed, the surface of the membrane was seen to be intensely injected. The spinal cord was in the state of a pulp.—*Casper's Wochenchrift*, 1849. x

BOOKS & PERIODICALS RECEIVED FOR REVIEW

DURING THE LAST TWO WEEKS.

- El Parte Medico. Numero 83. Madrid, 1850.
 El Observador de Ciencias Medicas. No. 5. 20 Febrero. Barcelona.
 Outlines of Medical Proof: revised and corrected. By Thomas Mayo, M.D. F.R.S. &c.
 The Hunterian Oration for 1850. By F. C. Skey, F.R.S.
 Some Account of the last Yellow Fever Epidemic of British Guiana. By Daniel Blair, M.D.
 Memoir on Turning as an alternative of Craniotomy and the Long Forceps in Deformity of the Pelvis, &c. By J. Y. Simpson, M.D. F.R.S.E.
 An Accommodation of the Eye to Distances. By Wm. Clay Wallace, M.D.
 The Cholera. What has it taught us? By W. J. Cox, Surgeon.
 An Exposition of the Case of the Assistant Surgeons of the Royal Navy. By a Naval Medical Officer. 8d edition.
 The Fifth Report of the Committee of Visitors of the County Lunatic Asylum at Hanwell.
 Comptes Rendus. Nos. 4 and 5, Jan. 28 and Feb. 4.
 Journal de Chimie Medicale. No. 2, Fév.
 British American Journal of Medical and Physical Science. February 1850.
 The London Journal of Medicine. March.
 Pharmaceutical Journal. March.
 The Chrono-Thermalist, or People's Medical Inquirer. No. 1, March.
 Evening Thoughts. By a Physician. London, Van Voorst, 1850.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Mar. 2.

BIRTHS.		DEATHS.	
Males....	813	Males....	460
Females..	781	Females..	436
	1594		896

CAUSES OF DEATH.

ALL CAUSES	896
Specified Causes	383
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	153
<i>Sporadic Diseases, viz.—</i>	
2. Dropsy, Cancer, &c.	46
3. Brain, Spinal Marrow, Nerves, and Senses	123
4. Heart and Bloodvessels	28
5. Lungs and organs of Respiration	176
6. Stomach, Liver, &c.	60
7. Diseases of the Kidneys, &c.	10
8. Childbirth, Diseases of Uterus, &c.	11
9. Rheumatism, Diseases of Bones, Joints, &c.	6
10. Skin.....	0
11. Old Age	45
12. Sudden Deaths	11
13. Violence, Privation, Cold, &c....	21

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	10	Convulsions.....	34
Measles.....	13	Brachitis.....	75
Scarlatina.....	21	Pneumonia.....	60
Whooping-cough.....	37	Phthisis.....	38
Diarrhoea.....	18	Lungs.....	9
Cholera.....	1	Toothing.....	14
Typhus.....	26	Stomach.....	6
Dropsy.....	17	Liver.....	9
Hydrocephalus.....	30	Childbirth.....	4
Apoplexy.....	34	Uterus.....	6
Paralysis.....	23		

REMARKS.—The total number of deaths was 504 below the mortality of the ninth week of five previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer	30.16
Thermometer.....	47.8
Self-registering de.	Max. 0.0 Min. 48.8
* From 13 observations daily. * Sun.	

RAIN, in inches, 0.0.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was about the mean of the month.

NOTICES TO CORRESPONDENTS.

Vectis.—We are informed on inquiry that the publication is not yet sufficiently advanced to allow of our giving the required information.

With much regret we are compelled to postpone the papers of Dr. T. Williams and Dr. Dewees until next week.

Mr. Luke's communication will appear in the following number.

The paper forwarded by Mr. Ross was received too late for insertion this week.

The notice of the Indian Journal will be inserted. A Subscriber, Boston.—In our last notice, for "Hospitals of Southampton," read "Hospitals of Paris."

RECEIVED.—Dr. Soltau.

Notice.—In order to prevent delay in the insertion, it is particularly requested that all letters enclosing Advertisements be marked on the outside "Advertisement."

Lectures.

COURSE OF LECTURES

ON

DISEASES OF THE HEART.

Delivered at St. Vincent's Hospital during the Session 1849-50.

By O'BRYEN BELLINGHAM, M.D.

Fellow of, and Professor in, the School of the Royal College of Surgeons in Ireland, and one of the Medical Officers of the Hospital.

LECTURE VI.

Mechanism of the action of the valves of the heart—Auriculo-ventricular valves—Sigmoid and semilunar valves—Safety valve function of the tricuspid valve—Impulse of the healthy heart—Mechanism by which the impulse is produced—Sound sometimes caused by the impulse of the heart—Seat of the impulse—Alteration of the impulse in inspiration and expiration—Double impulse of the healthy heart.

MECHANISM OF THE ACTION OF THE VALVES OF THE HEART.

THE valves at the arterial orifices of the heart are, Hunter* observes, "inelastic membranes having no action within themselves;" these valves are raised or depressed simply by a mechanical process, which can be effected equally well in the dead as in the living heart. The valves at the auriculo-ventricular orifices, on the other hand, being connected to the parietes of the ventricles by muscular columns, the shortening or lengthening of which are essential to the due performance of their valvular functions, cannot be made to act perfectly in the dead subject.

Auriculo-ventricular valves.—It has been already stated that the auriculo-ventricular valves are composed of curtains, of tendinous cords connected with these curtains, and of fleshy columns, which are attached by one extremity to the tendinous cords, and by the other to the parietes of the ventricle. Anatomists, in describing the mode of action of these valves, state, that one use of the fleshy columns is, by their contraction, to draw down the curtains of the valve, and so to approximate the edges of the valves, and close the orifice. It must, however, be recollected that, at the period at which the auriculo-ventricular valves close their orifices, viz., at the very com-

mencement of the ventricular systole, the ventricles are full of blood: hence the contraction of the carnee columns, and the tension of the tendinous cords, instead of approximating the edges of the valves and closing the orifices, would be rather to hold the curtains of the valves open, because the fleshy columns all run, more or less, towards the apex of the heart, to be inserted into the parietes of the ventricles.

It was long since remarked by Senac, that "in order for the auriculo-ventricular valves to close their respective orifices, the apex of the ventricle must be approximated to the base, as in the dilated state of the ventricle they are too short to do so." Hunter, in describing these valves, observes—"the tendinous cords are inserted into muscular columns, the intention of which is very evident: for if they had gone the whole length in the form of tendon, they would have been too long when the ventricle contracted, and the valves in such a case would have allowed of being pushed into the auricles; but the carnee columns keep the valves within the ventricle in its contracted state." The use of the carnee columns appears, then, simply to be to adapt the valve to the altered state of the ventricle during its systole and diastole, and to prevent them from being reversed during the systole. When the apex of the ventricle is approximated to the base during the ventricular systole, if these valves were not provided with muscular columns which shorten as the ventricle shortens, the valves would be reversed; but from the direction of the fleshy columns, as the ventricle is shortened, the carnee columns must be shortened at the same time.

The use of the carnee columns therefore evidently is, not to close the curtains of the valves: this is effected by the mechanical operation of the blood contained in the ventricle, as was long since shown by Lower, though recently advanced as a novel view by Baumgarten and Hamernik. The blood which enters from the auricle during the ventricular diastole, falls by its own gravity to the bottom of the ventricle, the curtains of the valve are thus floated towards the base of the ventricle; the auricular systole then impels a small additional quantity of blood into the ventricle: the systole of the latter instantly ensues, and the curtains of the valve are applied and pressed together so as to close the orifice. Hence the blood which enters the ventricle becomes in a great measure the means by which the auriculo-ventricular valves are closed, and regurgitation prevented.

The curtains of the mitral valve in closing the orifice, "meet (Mr. T. W. King*. ob-

* Treatise on the Blood.

* Guy's Hospital Reports.

serve) not only by their free edges, but by the marginal portions of their auricular surface; and thus on each curtain there is a broad line or surface of contact situated just within the auricle, or between it and the ventricle, varying in breadth, regularity, and distinctness." These he terms "the surfaces of contact or attrition:" very slight traces of them are discoverable in the healthy adult heart. "The surfaces of contact (he adds) are liable to become attenuated or even perforated by disease, and this is the explanation of many cases of atrophy of the curtains of this valve: an appearance which is seldom observed in the curtains of the tricuspid valve."

As soon as the ventricular systole ceases, the muscular fibres forming the walls of the ventricles, and the carnes columnæ of the auriculo-ventricular valves, are relaxed: the curtains of these valves, no longer pressed upwards by the blood, separate from one another: this fluid enters in a full stream from the auricle, until its systole again ensues, when the phenomena mentioned before are repeated.

Sigmoid and semilunar valves.—The mechanism by which the valves at the orifices of the aorta and pulmonary artery close their respective orifices, is, as I have said, simply mechanical; behind each of these valves a little sinus (sinus of Morgagni) is seated, into which the blood readily insinuates itself as the ventricular systole ceases; and the valves are pressed down by the weight of the column of blood above. Without some provision of this kind, the blood could with difficulty get behind those valves, and regurgitation into the ventricles of necessity would frequently take place during the diastole of these cavities.

When the ventricular systole ensues, the sigmoid and semilunar valves are elevated and pressed against the sides of the aorta and pulmonary artery by the blood in its passage into these vessels; and here again another use of the sinuses of Morgagni comes into operation—viz. to afford a space for the valves to lie back in at this period of the heart's action, and thus to render the interior of the aorta and pulmonary artery perfectly smooth and even at the part. If there had not been some provision of this kind, these valves would project, in a certain degree, upon the interior of the artery, render this portion of the vessel uneven, and of course increase the friction between the blood and the interior of the artery in its passage through it. When the aortic valves become rigid from disease, they cannot lie back in their normal position during the ventricular systole, and not only is the blood in its passage from the ventricle into the aorta impeded, but regurgita-

tion into the ventricle is, as we know, frequently permitted.

The little fibro-cartilaginous bodies (*corpora Arantii*) which are situated near the centre of the free margin of each of the semilunar valves, are supposed by some anatomists to serve the purpose of filling up the small space, which they suppose would be left in the centre, when the valves fall down; but, as these little bodies are not seated at the very margin of the valves, they could scarcely effect this object, which indeed is unnecessary, because it has been shown by Dr. Duncan that the arterial valves, particularly those of the aorta, overlap one another slightly where they meet: indeed, Mr. King says "the surfaces of contact are not unfrequently equal in extent to the remainder of the curtain of the valve." The use of these little bodies evidently is to strengthen the valves, by serving as points of insertion for the tendinous bands which enter into their formation. Without this provision, these valves would be very liable to become reversed.

Safety-valve function of the tricuspid valve.—Mr. Hunter,* in describing the action of the tricuspid valve, observes—"I have reason to believe that the valves in the right side of the heart do not so perfectly do their duty as those of the left; therefore we may suppose it was not so necessary." Mr. Adams,† after quoting the foregoing remark of Hunter, observes—"This circumstance, in my opinion, has not been sufficiently noticed, nor the influence that such a structure may have on the circulation in its natural or morbid state, considered. I look upon this difference in the valves of the right and left side of the heart to be a natural provision to allow of a partial reflex into the right auricle on those occasions when from any cause the passage of the blood through the arterial opening is retarded. Such a provision was absolutely necessary in the right or pulmonary ventricle, as various natural causes must momentarily retard the passage of blood through the lungs.

More recently, Mr. King,‡ in an elaborate paper on "the Safety-valve Function in the Right Ventricle," has entered at length upon the subject, and pointed out the mechanism in the construction of this valve by which he considers regurgitation to be permitted. In the same communication he has given a minute description of the tricuspid valve, and of the manner in which its fleshy columns are connected with the ventricular walls. The fleshy columns of the anterior and right ventri-

* Treatise on the Blood.

† Dublin Hospital Reports, vol. iv.

‡ Guy's Hospital Reports, vol. ii.

this valve are principally inserted (he observes) into the yielding wall of the ventricle; those of the posterior division into the septum: the latter is consequently more fixed. The anterior and right divisions of the valve he calls "the curtains of distension," and he considers them the agents by which the orifice is opened so as to permit of regurgitation into the auricle.

In the normal state of the tricuspid valve, and of the orifice of communication between the right auricle and ventricle, and when the ventricle is only moderately distended, regurgitation is not permitted: it does, however, occur if the right ventricle at the commencement of its systole is much distended: this may occur in a state of health when the heart's action is increased by any cause; but it subsides when this ceases, and the mechanism by which it is brought about is sufficiently simple.

In describing the tricuspid valve I mentioned that a single fine tendinous cord, not springing from any fleshy column, is frequently found to be attached by one extremity to some part of the anterior curtain of this valve, either near the base of its carnea columnæ, or near where the latter join the tendinous cords; the opposite extremity is inserted into the right or yielding wall of the ventricle, or into the base of the fleshy columns of one of the other divisions of the valve. Its use apparently is to prevent the anterior curtain of the valve from being applied to the orifice when the ventricle is much distended; and the more the cavity of the ventricle is distended, the more open will it keep this valve; while, when the ventricle is not much distended, it will in no way interfere with the perfect action of the valve.

While the tricuspid valve, under the circumstances mentioned, permits regurgitation, the mitral valve always perfectly closes the left auriculo-ventricular orifice, and never, unless when it or the orifice has undergone some morbid change, permits regurgitation. Indeed, the effect of disease upon these two valves or orifices is generally quite the reverse: in the majority of cases in which the mitral valve or orifice is altered from its normal condition, the opening is contracted; while the tricuspid orifice, on the other hand, is more frequently found to be dilated; and the phenomenon known as "jugular pulsation" usually attends the latter state.

"The mitral valve (Mr. Adams* observes) so perfectly closes the aperture of communication between the left auricle and ventricle, that in the natural state no reflux whatever is admitted: this, so useful at the right side of the heart, would have

been not only useless, but injurious, at the left side of the organ, as we find the general arterial system at all times equally ready to receive the blood during the systole of the left ventricle; and if the mitral valve did not close the left auriculo-ventricular aperture, a great deal of the force of the aortic ventricle would be wasted, whereby it would be incapable of moving the mass of blood which was destined to fill the arterial system." "Pathologists, in looking (he adds) to the different nature of the lining membrane at the two sides of the heart, as a means of explaining the greater liability of the left side to disease, have perhaps too much overlooked this circumstance—that while, from the unyielding nature of the mitral valve, all reflux into the auricle is prevented, from this very cause, which renders it effective in the circulation, is it exposed to more frequent injury, from which organic disease may arise, and the ventricle to which it belongs becomes more liable to be ruptured by its own efforts."

Impulse of the healthy heart.—The impulse of the heart accompanies the systole of the ventricles and the first sound of the organ, and has its cause in the apex of the heart coming in contact with the parietes of the thorax between the cartilages of the fifth and sixth left ribs. The mechanism by which the impulse is produced was long a disputed point, and various have been the theories advanced by physiologists to explain it: even the period of the heart's action at which it occurs has been the subject of difference of opinion.

Thus it was at one time maintained that the impulse occurred during the diastole of the ventricles; and this opinion appeared to derive confirmation from the fact that when the heart of the frog is exposed (which will continue to pulsate for a considerable time after being laid bare), the ventricle, during its diastole, is seen to expand, and to approach the parietes; while during the systole the apex is simply approximated to the base. In this animal, therefore, the heart approaches the parietes during the diastole, not during the systole of the ventricle, and any impulse which is given must be at the period of the ventricular systole. An experiment was performed by Oesterreicher,* which consisted in removing the heart of the frog from the body, and laying upon it a substance sufficiently heavy to press it flat, and yet so small as not to conceal the heart from view. He states that during the systole of the ventricle the weight was raised, but that during its diastole the heart remained flat. This experiment has been quoted by

* Dublin Hospital Reports, vol. iv,

* Müller's Physiology, vol. i,

Müller and others, to prove that the diastole of the ventricles is not a muscular act, in ignorance apparently of the foregoing peculiarity in the action of the heart in this animal. In warm-blooded animals, however, experiments and observations repeated over and over again have proved that the impulse occurs at the period of the ventricular systole, and that it is due to the apex of the heart coming in contact with the parietes of the chest.

Mechanism by which the impulse of the heart is produced.—It will not be necessary to delay to notice the various theories which have been advanced in order to explain the mechanism by which the impulse of the heart is produced: the majority of these are founded on erroneous views. It will be sufficient to observe, that during the ventricular systole the walls of the ventricle become more convex upon the surface, the apex of the heart describes a spiral motion from behind forwards, and from right to left: in describing this spiral movement, the apex glides obliquely upon the pericardium, is approximated to the base, comes in contact with the parietes of the thorax in the intercostal space between the cartilages of the fifth and sixth ribs, and thus causes the impulse. Indeed, this part of the heart is naturally so close to the parietes of the chest that no tilting forward of its apex is necessary to produce the slight shock felt at this period.

It was the received opinion until within a few years, that during the diastole of the ventricles the heart receded from the parietes of the chest, and that the impulse was produced by a blow, or shock given to the ribs by its apex, during the systole. Harvey, Hallor, Senac, and Hunter, may be quoted as authorities for this theory. The experiments which have been performed upon animals of late years, and the examination of the action of the organ in cases of ectopia of the heart, have, however, shown that this theory has no foundation, and that the heart "does not suffer any changes in consequence of its own efforts (exclusive of the movements of the lungs and diaphragm) except in its shape and size, in the thickness and tension of its parietes, and in the capacity of its cavities," which are quite sufficient to produce the slight shock felt when the hand is laid on the parietes of the chest.

M. Ritter has recently advanced this as a novel doctrine, in ignorance probably of the results of the experiments of the "Committees of the British Association." His experiments are entirely corroborative of those previously made. "The portion of the heart's surface (he observes) which is in immediate relation to the walls of the chest is at all times in close contact with

them; and it is impossible that in any of its motions it can act so as to withdraw itself from the thoracic walls, or so as to leave a space between them." "Being thus fixed, therefore, it follows that, when the heart contracts and assumes a more globular form, it will exert its distending force on the yielding intercostal spaces against which it rests, and will thrust them forwards, so as to produce the impulse. This distending force cannot be exerted with any effect against the unyielding ribs or their cartilages; and, consequently, the impulse is not perceived by the finger placed over the cartilages of the fourth, fifth, or any other rib. If the impulse was caused by an actual stroke or blow of the heart against the walls of the chest, it would be perceived on these parts and on the sternum as clearly as it is in the intercostal spaces, and every person would feel the impulse of his own heart just as a pregnant woman feels any violent movements made by the fetus in utero."

Sound sometimes produced by the impulse of the healthy heart.—Although in the healthy subject, when the circulation is tranquil, and the heart's action is normal, no sound is produced by the impulse, yet it occasionally happens that when the same heart is excited to increased action,—in other words, when palpitation ensues, whether the cause be mental emotion or corporeal exertion, but particularly the former,—the apex of the heart does come in contact with the ribs, the patient feels the blow or shock produced by the impulse of his own heart; and this is accompanied by sound, which of course will be heard at the period of the first sound of the heart, and will modify it in a certain degree, or add to it. Under such circumstances the first sound of the heart becomes loud and ringing, and in diseased states it is sometimes so intense as to be audible without applying the stethoscope, and may be heard at a short distance from the patient. This point will be again alluded to when we come to consider the abnormal conditions of the heart.

Seat of the impulse of the heart.—The point at which the impulse of the heart is felt in the healthy male is the intercostal space between the cartilages of the fifth and sixth ribs upon the left side, to the sternal side of the nipple, and about two inches below this point. In the female, owing to the habitual wearing of stays, the impulse is usually a little higher up—viz. between the cartilages of the fourth and fifth left ribs; and in the latter months of pregnancy, for an obvious reason, it is perceived still higher up, and the apex is pushed more to the left side.

The impulse of the healthy heart is

naturally slight : it is more marked in the erect than in the recumbent position, because in the latter position the heart, by its own weight, recedes slightly from the parietes of the chest. For the same reason the impulse becomes more distinct if a person leans forward, and more indistinct if he lies upon his right side. In the erect posture the impulse is said to be slightly lower than in the recumbent posture ; but the difference, if any, is very trifling. In very fat persons the impulse is scarcely perceptible to the eye or hand ; in very lean persons it is very obvious to both. When the lungs are largely developed they will overlap the heart more than usual ; when the lungs are small, less of the heart will be covered by these organs : in the latter case, therefore, the impulse will be better marked than in the former.

Alteration of the impulse in inspiration and expiration.—In inspiration, particularly on a full inspiration, the impulse of the apex of the heart will be felt lower down than natural, as low as between the cartilages of the sixth and seventh ribs, or, in the epigastrium, between the line of the xyphoid cartilage. This is partly owing to the connection of the heart with the lungs, and partly to the connection of the pericardium with the diaphragm. On a full inspiration the lungs expand from above downwards, as well as from before backwards ; and, according to Dr. Sibson, from the manner in which the pulmonary veins are joined to the left auricle, the heart is drawn down by the descent of the lungs. The principal cause of this descent of the heart in inspiration appears to lie rather in the intimate connection of the pericardium with the central tendon of the diaphragm ; as the latter descends it must bring with it the heart ; and from the connection of the inferior or ascending vena cava with the diaphragm, it must follow the movements of the latter, and draw down the right auricle. On a full inspiration, the impulse, in addition to being lower down, will be less marked than natural, because the lungs, when fully inflated, meet so as almost to cover the heart, and prevent its apex from coming in contact with the parietes of the thorax.

On a forced *expiration*, on the other hand, owing to the ascent of the diaphragm, the impulse of the heart is felt higher up—viz. on a line with the space between the cartilages of the fourth and fifth ribs on the left side : it is likewise more marked than natural, because the heart is less covered by lung. The point at which the impulse of the heart is felt is altered in some diseases of this organ, or of the lungs, or pleura, as well as in diseases of the abdominal viscera. These matters will, how-

ever, be considered when we come to describe the diseased states of the heart.

Double impulse of the healthy heart.—The impulse of the healthy heart has been almost always described as single ; Magendie,* however, who attributes the first sound of the heart to the shock of the apex during the ventricular systole, lays it down that the second sound is due to the shock given by the ventricles to the parietes of the thorax during their diastole. "The ventricles in dilating (he observes) in a great measure under the influence of the rapid influx of the blood, give a shock to the anterior parietes on the right side of the thorax, and thus produces the second clear sound." Dr. Sibson,† in his valuable essay upon the "Changes in the Situation of the Internal Organs," observes :—"A second impulse is often felt in persons whose lungs are diminished, and whose great vessels come close to the sternum. This is synchronous with the second sound, and must, I conceive, be due to the sudden springing forwards of the walls of the right ventricle after the systole." In the year 1848, in a communication‡ upon the subject of "Aneurism of the Aorta," made to the Surgical Society of Ireland, I called attention to the fact that the impulse of the healthy heart, when the organ is acting vigorously, is double, not single.

The impulse of the healthy heart, I observed upon that occasion, has been always described as single, just as that of aneurism of the arch of the aorta was supposed to be. If we carefully examine this organ, however, when it is beating vigorously, we shall find that a second but slighter impulse is perceptible, which quickly succeeds the other ; and on applying the stethoscope we shall find that this second impulse accompanies the second sound of the heart : it appears as if the agency which gives rise to the second sound was capable of communicating a distinct sensation to the hand or stethoscope.

In the healthy heart the second impulse is scarcely felt, unless the organ beats vigorously ; when the ventricles are somewhat hypertrophied, and their cavities somewhat dilated, the second impulse becomes better marked ; when this has arrived at an extreme degree it becomes very evident, and constitutes then the "back stroke of the heart," or the diastolic impulse. This diastolic impulse, except in cases of disease, is never so strong as to be perceptible to the eye, but is readily distinguished when the ear is applied to the stethoscope laid upon the præcordial region. It is perceived at the same part of

* Elements of Physiology.

† Trans. of Prov. Association, vol. xii.

‡ Dublin Medical Press, vol. xix.

the chest as the systolic impulse, and is more marked the larger the surface of the heart uncovered by lung, and the stronger the action of the organ.

With respect to the cause of the diastolic impulse, Dr. Sibson* observes—"The second or diastolic impulse, which is felt between the second and third, and sometimes between the first and second costal cartilages, is neither more nor less than a sign that the upper part of the right ventricle, and the origin of the pulmonary artery, over which it is felt, are in contact with the walls of the chest." "This diastolic impulse, which is synchronous with the second sound, is a physiological, not a pathological phenomenon, and is due to the sudden return forward of the walls of the right ventricle, and of the origin of the pulmonary artery, immediately after the systole; the parts in question then impinge with a short sharp tap on the left second and third costal cartilages, and on the space between them."

When describing the motions of the heart, we saw that during the ventricular diastole the apex of the heart recedes from its base; the organ becomes elongated, the ventricles increase in all their dimensions, and the hand grasping the heart is forcibly opened. Now, when we consider how closely the anterior surface of the ventricular portion of the heart lies to the parietes of the thorax, there is no difficulty in understanding how an impulse may be communicated during this movement equally as during the ventricular systole; it appears only surprising that it should have been so very generally overlooked.

RESEARCHES ON THE DEVELOPMENT OF
THE MUSCULAR FIBRES OF THE HEART,
AND OF VOLUNTARY MOTION. BY DR.
LEBERT.

TOWARDS the thirty-sixth hour of incubation, the contractions of the heart of the embryo chick are distinct and regular: nevertheless, at this time the structure of the heart presents only organo-plastic globules surrounded by granular matter. The primal structure of the embryo heart is the same in all vertebrate animals; and in many lower animals, such as the compound ascidia (e. g. *Amorucium*, Milne Edwards), it constitutes the permanent condition. An undoubted difference between these and the globules of the heart's structure may be established from their earliest appearance. This obtains equally with the globules of the hearts of the embryos of mammalia and of fishes: the batrachians alone seem to form an exception, and in these there is rather resemblance than identity between the two kinds of globules.

From the third to the fourth day of incubation the structure of the heart assumes a more diffused appearance. The cellular envelopes of the organo-plastic globules in great part disappear. At this time a superficial layer of fusiform elements may be distinguished, which afterwards becomes the pericardium.

From the fourth to the fifth day there may be noticed for the first time, in the midst of the globular elements, elongated cylindrical bodies arranged in reticulated groups. These, the inorganic cells or bodies, constitute the first rudiments of the muscular fibres; and, whether in the heart or in the voluntary muscles, whether in the superior vertebrata or in the batrachians, these always precede the development of the true muscular fibre; which, indeed, constitutes but a higher degree of their development. M. Lebert has not been able to observe the formation of these cells or bodies by regular linear allocation of plastic globules. Some included globules which are noticed must be considered accidental: they are wanting in those of embryo mammiferi, which, however, they surround externally. The absence of nuclei and nucleoli in these bodies does not disprove their cellular character, since the same feature is found in the globules of the vitellus of the chick, and of the dorsal cord of the embryo frog. The myogenic bodies, though generally roundish, are at first irregular in form in the superior vertebrata.

After the seventh or eighth day the plastic globules notably diminish, and entirely disappear some days later. The muscular fibres gradually assume their longitudinally striated aspect. Their internal granules arrange themselves in groups in the direction of the length of these bodies, which correspond to the *primitive fibres* of authors. The transverse markings of the fibres are not seen until much later, and it is not until toward the expiration of embryonic life that they are constantly seen. The fibres of the voluntary muscles are formed later than those of the heart, from five to six days after the heart has fully commenced its functions. To give an idea of the distance of time that separates the development of the heart from that of the muscles of voluntary motion in mammifers, it may be stated that the former is seen in the embryo of the bat when .078 inch in length, whereas the latter is only met with in embryos of about half an inch in length (0.468.)

A reverse order obtains in the tadpole, in which a necessity exists for early movement in the fluid in which it floats, in order to seek its nourishment. In proportion to this necessity is the early development of the voluntary muscles in all embryos.—*Comptes Rendus*, 1849. x

* London Journal of Medicine, vol. i.

Original Communications.

ON THE
PRESENT STATE OF LUNACY, AND
OF LUNATIC ASYLUMS,
AND ON THE NATURE AND TREATMENT
OF MENTAL DERANGEMENT.

BY WILLIAM SMITH,

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subsequently in the General Hospital at Lin-
coln.

(Read before the Medico-Chirurgical Society
of Nottingham, December 7th, 1849.)

[Continued from p. 320.]

My esteemed friend, F. D. Walsh, Esq., the experienced medical superintendent of the Lincoln Lunatic Asylum, who has had very numerous opportunities of observing the phenomena of insanity both in England and Scotland, in an interesting letter developing his views of the nature and treatment of mental disorders, has remarked:—"If a patient is in such a state that he would run his head against a wall, seclusion would do him harm. I have found it the best practice in these cases to give them as much air and exercise as possible, keeping an attendant with them to keep them from injury. I never mind their dancing about, or their grotesque actions, for they will sleep better after these actions than after any opiate. The attendants are so aware of this, that when a man is restless in this asylum, or sleepless and noisy at night, they are anxious to get him out (as they say), to let him run it off. I had one case secluded by Dr. Nicholson, under the pretence of putting him under medical treatment. He gave him in less than twenty-four hours above two ounces of Battley's sedative solution, without any other effect than increased excitement, till the case became at length what is called dancing mania: he began dancing and knocking his fists or his legs against the wall. (I was asked a few days before, by a German physician, 'where would my non-restraint be in a case of dancing mania?'—you shall see.) I ordered this man to be taken into an open gallery, and the violin to be played to him, and let him dance till he was tired; I then told him he had not had dancing enough, he had

better have a race; I then took him into the grounds, and raced with him; he then had his supper, and went to bed: he slept through the whole night—the first sleep he had during a fortnight. He had no mania the next morning, and got well from that day: has been discharged as recovered, and is now succeeding very well in his business. I think this case is remarkable, as showing the evils of seclusion in cases of mania; and from the benefits I have seen derived in this and similar cases by means of exercise, I feel convinced that the propensity for muscular exercise should be encouraged, as one of the means established by nature for recovery."

With this opinion of Mr. Walsh I most cordially agree, all my experience amongst lunatics leading me to the decided conviction that an insane person, like a man in a furious passion (for we were taught even in our school-boy days, "*Ira furor brevis est*"), should be interfered with as little as possible, and that the mischievous practice of employing mechanical restraint, or solitary confinement, or prescribing large doses of narcotic and sedative drugs, for the purpose of subduing a maniacal paroxysm, is in direct opposition to every philosophical or physiological principle, and unworthy the present advanced state of psychological medicine.

During the whole of my official connection with the Lincoln Lunatic Asylum, I never, in any one instance, employed mechanical restraint, as the following Board minute will clearly demonstrate:—"December 5th, 1842.—Resolved, on the motion of Dr. Charlesworth, seconded by Mr. R. G. Hill, 'That this Board, on the retirement of Mr. William Smith, cannot omit the opportunity of expressing its acknowledgments for his having conducted the personal management of the patients of this house without a single instance of personal restraint, and, at one period, under peculiar difficulties, from the want of adequate and experienced attendants.'

"That the best acknowledgments of this Board are due to Mr. William Smith, for his having latterly laid down, and adopted in practice, the broad principle, that solitary confinement ought to be utterly abolished."

The governors of the Lincoln Asylum, in their 18th Annual Report (1842),

have some admirable remarks on the treatment of lunacy; and as that report was based on *letters* of mine, and *special reports* made in my official journal as the director of the establishment, I consider that I have a *moral right* to bring them forward in support of my views of the treatment of mental derangement.

"The treatment of insanity in modern times has become gradually more and more successful. This may be divided into the medical treatment of the insane, and the general economy of their management.

"The strictly medical practice may be said to have made very insignificant advance; and it may at once be distinctly stated, that the expectation of success under any specific medical means is founded on the most erroneous principle. Many diseased structures, and many disordered functions in various parts of the human frame, may directly, or by sympathy, produce derangement in the corporeal organs used in the operations of the conscious power. It is clear that sound practice must depend upon a systematic classification of the different exciting and sustaining causes which affect these organs: and though the intellectual symptoms may appear identical, it is clear that these exciting and sustaining causes must be considered in practice as so many distinct species of disease. Nor should the great rarity of insanity originating in the disturbance of certain functions, or from rarely occurring causes, at all prevent them from being studied as objects of distinct treatment.

"The phenomena will often depend upon the temperament, the natural constitution, and previous habits of the individual, and will often vary in the same case; and yet writers on the subject have based their classifications upon these fluctuating phenomena. Among the whole it may be affirmed, that none of them may be considered as founded on known pathological distinctions, except what may be termed intellectual lunacy, imbecility, and caninate fatuity.

"But the prospect is very different when we turn to the results arising from an improved general economy in the management of the insane. Nature has powerful restorative tendencies here, as in all other cases; and lunatics have recovered under the most opposite and even hostile modes of treatment. These

improvements have been negative rather than positive, and have consisted in giving nature free play, and removing, as far as possible, all obstructions to her healthy action.

"It is now established that a vast number of recoveries are effected without any specific medical treatment, beyond such as is required in ordinary life: and that these important results have arisen from attention to some plain and obvious principles. Patients should be kept comfortably warm, and not subjected to great changes of temperature; they should be in the open air to the utmost extent that the state of the weather will allow; they should adopt regular hours, regular meals, and regular habits of every kind; their diet should be plain, digestible, and nutritious; they should avoid, except under special circumstances, stimulating liquors, and highly-seasoned food; there should be a studious avoidance of all depletive, exhausting, and depressing influences; their minds should be amused and engaged, and agreeable employments also provided for them; there should be an encouragement to habits of self-control, moral self-restraint, and self-respect; they should be placed under an entire change of scene; there should be the nearest approach to the habits of ordinary life which the circumstances will allow, and with this view their habitations and accommodations should be purposely planned and arranged; the secretions and excretions of their system should be very carefully attended to; and every thing which would produce mental or bodily irritation should be studiously avoided.

"The management of the insane has hitherto been conducted with such affected mystery, and under such exaggerated and coloured pictures of their usual state, that it has required considerable moral courage openly to take the ground of treating them in every particular as human beings. This institution has ventured upon some experiments for breaking through the delusion. It has been an object to familiarise the patients with the various habits and practices of ordinary life, by which the mind is brought into a more healthy tone, and its extravagant wanderings limited; while, also, the mind is, as it were, drawn outwards, and directed to the contemplation of healthy realities, from the distempered and

heated imaginations which before absorbed it.

"Another similar object has also been aimed at. It is desirable that the insane should mix in occasional association with the sane, for the restoration of ordinary habits of thinking and acting, as a standard of reference; and for the more important object of breaking down the mischievous barrier studiously maintained between them. By this the sane are enabled to estimate the treatment due to the patients, and also encouraged to see that such treatment is actually carried into effect.

"It is attempted also to amuse the patients out of doors; they walk into the country; they attend the officers of the establishment during their calls in the town, and remark with some little pride upon the attention which they fancy themselves to attract; they attend at private parties when the friends of the officers invite them; they are seen behaving with great propriety at the solemn worship of the cathedral, and elsewhere; they go round the public institutions of the place, the union, the mechanics' institution, the public library, the castle grounds, &c.; they are seen at public concerts, at the theatre, and at the menageries and other shows at the fairs. The Lincoln race-ground, and the whole of the races, are distinctly visible from the front grounds, and are of course duly noticed. The conclusion from the whole is, that the attention of the patients should be drawn from internal reverie to external impressions, by gentle and exhilarating measures, and not by forcible means; such as the whirling chair, the douche, stripes, chains, terror and violence. Moral exhilaration and cheerful lively pastime must not be confounded with irritation, or the temporary and exhausting effects of stimulus. There is much real or pretended false alarm about the danger of exciting the insane. The excitement arising from the development of the kindlier feelings of their nature, or the diversion of their attention to external objects by the presence of strangers, &c., must be considered to exert a healthy action on the mental and corporeal system. The appearance of excitement also sometimes exists with but little of the reality; and we must not be misled by the harmless bluster of the insane, 'full of sound and fury signifying nothing.' At the same time,

after the enumeration of the above amusements, a caution must be given against regarding lunatics as destitute of understanding. These amusements must be rather considered in the light of relaxation, in which even powerful minds are most pleased to indulge, and in which all men should indulge, during the debility attendant on the depression of recovering from sickness. The intellect of the insane, where not reduced to the imbecile state, is as acute as ever, and sometimes more so; and it is not uncommon in private practice to find a patient quite competent to the perusal of a classical writer, or a work of science. The habits of ordinary life should be steadily referred to as a standard; and it is creditable to public institutions, that the mummery of straw crowns, chaplets, and sceptres, formerly encouraged for effect, have so far disappeared, that the grounds of a public asylum now exhibit less and less eccentricity of appearance.

"The increased proportion of recoveries under the full development of the system of non-restraint, non-seclusion, and exhilarating engagement, in this house, affords gratifying assurance of the soundness of the practice; and the reduced duration, and consequently reduced cost, of the period of treatment, are conclusive as to its economy. The favourable impression which must be made upon the public, who witness the management of insanity stripped of its former horrors and its terrors, and clothed with the amenities and enjoyments of social life, will, it is to be hoped, lead to an earlier removal of the insane from their own unsuitable habitations, and thereby obviate the enormous waste of life, and health, and property, resulting from the fatal error of delay in resorting to well conducted institutions. The great accumulation of incurable patients to be found in most asylums, a lasting burthen on their connections, or the public, is mainly attributable to this delay."

Dr. Conolly, the learned physician of the Hanwell Asylum, who may be justly looked upon as the British Pinel, has some excellent remarks in the lucid reports which have yearly issued from that leviathan establishment. He observes—"Any contrivance which diminishes the necessity for vigilance, proves hurtful to the discipline of an asylum. Physical restraints, as they rendered all

vigilance nearly superfluous, caused it to fall nearly into disease; and, in proportion to the reliance placed upon them, innumerable evils of neglect crept in, which cannot exist where restraint is not permitted.

"Habitual intercourse with the insane cannot but impress those the most zealous for giving extended exercise for what is termed moral treatment, with the conviction, that the only prudent course with a lunatic during a state of violence is to interfere as little as possible. Danger and mischief must, of course, be guarded against; but direct interruption is not always practicable; reasoning produces fresh irritation; contradiction commonly exasperates; and violence leads to injury, or leaves a lasting feeling of sullen resentment. Perfect calmness of demeanour and countenance, forbearance from sharp rebuke, the occasional interposition of a soothing word, or of an idea that may divert the patient's thoughts, are not only the most useful measures at the time, but make some impression on the lunatic himself. A few broken expressions, in the midst of his violent talk, will sometimes indicate, to those accustomed to analyse such vehement language, that he knows what is said to him, and in what manner it is said. His subsequent references to the interview often leave no doubt of it. Sooner or later, calmer hours and days occur; and it is in these intervals that all the resources of moral management may be applied; and that the practitioner must avail himself of the degree of intelligence then manifested by the patient, and of the remnant of the affections that survives. Nothing must now be omitted that can have the effect of gaining the patient's entire confidence. On the accomplishment of this point everything in the future control of the case turns.

"Under the system of restraints, when a patient became noisy and violent, and particularly when some mischief had been committed by him, it was considered necessary, and it was the usual practice, to overpower him, and to put him in some kind of strait waistcoat. This was done with great difficulty, and with much danger to the attendants. Observation has convinced the resident physician that this was a useless, and even hurtful, mode of management. It was like endeavouring

to smother a fierce fire by heaping combustible materials upon it. A maniac in the midst of his paroxysm, like a man in a violent fit of passion, should be interfered with as little as possible. The violence which, if met by violence, will become still more aggravated, will often, if left to itself, subside even in the course of five or ten minutes. Whatever the duration of the violent accession, its continuance is a bar to anything but such management as protects the patient and those about him. It is in intervals of calmness that the foundation of moral treatment must be laid, and the confidence of the patient gained. To acquire this confidence is the key-stone of all moral treatment; and nothing will so much oppose its acquisition as brutal or even impatient usage during the paroxysm."

In another report, this excellent and acute physician (Dr. Conolly) remarks—"The pride of medical science is disconcerted by the reflection that mere medicine has had but a small part in the cure of many patients who leave an asylum well. But the application of medical science is not limited in any disease to the administration of drugs, or the abstraction of blood; and least of all in diseases of the nervous system. Hence it arises, that the general management of an asylum, the regulation of the diet, the exercise, the hours of rest, the occupations, the amusements, the dress, and conduct, become of wide application and extreme importance. These matters, well arranged, become general medicines; influencing the whole frame of body, and bringing it into a state in which the mysterious troubles of the brain have the best chance of becoming composed. In an asylum containing at all times a large proportion of incurable lunatics, the influence of all these circumstances on the comfort, happiness, health, and longevity of these unfortunate beings, becomes scarcely second in importance to the cure of those who are not beyond hope."

Much as I admire the elegant style and classical language of this worthy physician (and no one who has attentively studied his excellent Clinical Lectures, or the invaluable Reports of the Hanwell Asylum, will deny him these qualities), there is, over and above all these, a peculiar charm in the philanthropic sentiments and extended

views of practical humanity which characterise his writings. Like the immortal Pinel, he takes no short-sighted or contracted views of the requirements necessary for the forlorn and defenceless lunatic. Even in the veriest trifle appertaining to their comfort, we perceive the same comprehensive system—the same means to an end. Without wishing to detract from the high character, or question the capabilities, of the Lunacy Commissioners, who have of late very closely scrutinised the management of lunatics, and the conduct of persons officially entrusted with the care of the insane, I cannot help expressing my deliberate opinion, formed from a careful perusal of their own published Reports, that they are disposed to place too much faith in the administration of mere drugs, and too little reliance on moral and regimenial measures, or, what the Lincoln governors very aptly style, the general economy of the management of insane persons. I have now watched the various phases of disease, upon a tolerably large scale, for a space of fourteen years, during half of which period my life was spent in official appointments, where, of course, I have come in contact with men of high standing and long experience in medical science; and the result of all this fully confirms my belief in the efficacy of the *vis medicatrix nature*, and the immense benefit resulting from allowing Nature free play. I have seen surgeons in hospital practice repeatedly undo, at their morning visit, that which a higher power had assiduously laboured, during the preceding twenty-four hours, to bring about; and physicians order pills, powders, and potions, when, in reality, a mutton-chop and porter, or an hour's exercise in the open air, would have restored the patient to comparative health. In the present age medical practitioners, like west-end milliners, are principally ruled by the Book of Fashions. Only let some adventurous and sanguine practitioner, possessed of the infallible talisman, M.D., M.B., or F.R.C.S., propose a new remedy, or an out-of-the-way operation, be it chloroform, or catheterising the Fallopian tubes, &c. &c.; let him forthwith advertise himself and his marvellous abortion, or *parturiunt montes* offspring, in a popular medical journal, and straightway the experiment is tried on hundreds of faith-inspired patients,

to the great emolument of the operative chemist or the crack instrument-maker of the day. And yet every body rails at the Homœopaths, Mesmerists, *et hoc genus omne*, whilst the numerous quacks within the profession grow rich, and laugh at their honest-principled brethren. Can any person of discernment carefully peruse the writings of the sagacious Sydenham (the British Hippocrates), or the philosophic Denman, and, noting the few and simple remedies recommended by them, and their almost unlimited faith in the efforts of nature,—not feel a certain disgust at the immense farrago of drugs, chemicals, &c. recommended by the present meddlesome race of practitioners. We want more authors of the Brodie, Latham, and Watson school—men who have laboured to reduce the science of medicine to a few sound fundamental principles, and have limited their *Materia Medica* to a small number of drugs judiciously administered.

The Governors of the Lincoln Asylum, in one of their Reports, most truly remark:—"The severity of an asylum does not, as is supposed, consist in the outrage, blows, and active ill-usage occasionally brought to light, and which may be prevented by a superintendent having any claim to humanity or attention, and who has eyes to see bruises and a voice to ask their origin: its torturing effect lies in the aching of limbs forcibly detained in one position, especially during the night, forbidden the ease and alleviation of change, with confined irritability for which Nature has opened the vent of free motion, monotony, the feeling of oppression, surrounding miasma, contempt and neglect,—all much more keenly felt than occasional violence, and sometimes prompting fatal acts of revenge or despondency.

"Lunatics do not lose with their reasoning faculties their bodily susceptibilities, although occasionally perverted. It is true that they have been known to bear extreme privations of warmth, food, fresh air, cleanliness, and kind attention, without complaint or other sign of suffering; but, as fire will scorch a paralysed limb, notwithstanding that the sense of feeling may be suspended or lost, so will cold, meagre and unwholesome diet, foul air, filth, and a neglect of all the common decencies, and comforts, and enjoyments of humanity,

injure health and shorten life, whether any consciousness of the mischief in progress may be exhibited or not."

The experienced and sagacious Pinel has a short chapter, entitled "The Art of Counteracting the Human Passions by others of Equal or Superior Force,—an Important Department of Medicine," in support of which he observes:—"The doctrine in ethics, of balancing the passions in men by others of equal or superior force, is not less applicable to the practice of medicine than to the science of politics, and is probably not the only point of resemblance between the art of governing mankind and that of healing their diseases. The difference, if there be any, is in favour of medicine, which considers men individually, and independent of social institutions, but, notwithstanding, can, in many instances, apply no other remedies than those of not thwarting the propensities of nature, or of counterbalancing them by more powerful affections. A young man fell into melancholia and asthenia, in consequence of a disappointment in love. Ariteus, whose advice was taken upon his case, could prescribe no other remedy than that of possession. Oribasis recommends the union of the sexes as a valuable remedy in cases of melancholia. Forestus supposed that severe restrictions upon the sexual propensity might, in some instances, produce mental derangement. To arrive at the knowledge of such a cause of the malady, when it is the patient's interest and inclination to impose upon the medical attendant, requires, however, great address and sagacity. Galen and Erasistratus have given examples of this kind, which are so striking and so well known, that it is only necessary to mention them. The spasmodic affections of women depend almost universally upon some concealed or suppressed exertion of the passions. The case of a disgraced courtier, who, in consequence, became melancholic, was designated by an ingenious physician 'recoiled ambition.' The presentation of a captain's commission to the soldier who first mounted the assault upon the taking of the Bastille, and who was afterwards confined as a maniac at Bicêtre, would have been a treatment much more suitable to his case than bathing and pumping.

"A new passion is sometimes generated by some favourable circumstance,

in consequence of which melancholia may be cured. A rich merchant met some inconsiderable reverses of fortune. His imagination was, however, so deeply impressed, that from that time he believed himself to be a ruined man, and that he had no other prospect than that of dying by hunger. No exertions were spared to convince him that he was still in possession of a very large fortune. The rich contents of his bureau were displayed in his presence; but these he believed to be only false appearances; and his prevailing idea of extreme poverty continued to haunt and distress him. It was at the period of the disturbances excited in Germany by the reformation. What the advice and medicines of Forestus failed to produce was effected by ardent zeal for the Catholic religion. The melancholic exerted himself night and day, both by conversation and writing, in defence of the rituals of the Romish Church. It was not long before he was completely cured of his melancholia."

Are not these remarks singularly applicable to the present humane mode of managing the insane? What is employment, but diverting the maniac from his own morbid catenation of ideas? How does amusement act but by withdrawing the patient from "internal reverie to external impressions?" Why should music have such a soothing power over the violent madman, as that he shall, whilst under its becalming influences, mix harmlessly and (to all appearance) happily with delicate female children of ten years of age in the mazy dance? Surely such facts as these (and any one who has attended the periodic balls of the Lincoln Asylum will verify the accuracy of the assertion) must convince the most sturdy advocate of straight waistcoats, leg-locks, &c., that a happy "change has come o'er the spirit of our dreams," and that the noble and philanthropic work begun by the immortal Pinel, and since matured by the indomitable energy and unceasing exertions of a Tuke, a Charlesworth, a Conolly, and a Nesbitt, is steadily but surely working its way towards a glorious completion; so that ere long the humane system of non-restraint may be fully adopted and thoroughly carried out in every lunatic establishment throughout the British empire.

Belper, South Derbyshire,
January 1850.

THE
CERVIX UTERI,

AND THE MODERN TREATMENT OF ITS
DISEASES.

By T. WILLIAMS, M.D. Lond., Swansea.

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THE sagacity and enterprise of a few philosophic practitioners have recently elucidated many of the obscure points with which obstetric medicine has at all times abounded. The case recorded in the following contribution is conceived to be not unworthy of perusal by those whose services in this department of medicine every practitioner must gratefully acknowledge. It is an accurate and faithful portraiture of what has actually occurred. The purpose of the author is not, in an unworthy spirit, to discourage the progress of improvement, nor to disparage the labours of the successful cultivators of practical medicine: it is, to eliminate the elements of dangers from methods of treatment which constitute unquestionable improvements upon the older regime, that this instructive narrative, which, indeed, from illiberal quarters may raise a reproach against its own author, is offered to public notice.

I was consulted a few months ago by a healthy young woman, æt. 25, who had been married two years, but who had never been pregnant. The menstrual period commenced at the age of 16 years, and the catamenia continued to recur with regularity until she became the subject of an attack of continued fever at the age of 19 years; after which the catamenial periods became less regular in duration and recurrence; and at this time also she became a sufferer from a constant leucorrhœal discharge, which by her mother was accounted among the consequences of the fever. During the two years preceding her marriage the general health underwent very marked improvement; at no time, however, did the leucorrhœa entirely cease. After marriage, the leucorrhœa assumed a more disagreeable and aggravated form, attended by various distressing uneasiness in the ovarian, hypogastric, and sacral regions. The menstrual flux became still more uncertain in time and

quantity; sometimes excessive and exhausting, and sometimes scanty and insufficient. The bladder and rectum gave no signs of functional disturbance; congress not painful. By the touch, I found that the cervix was anteverted, affording the sensation of gristly hardness; little sensitive to pressure. The anterior labium very distinctly larger than the posterior; the os patulous, receiving readily the extremity of the finger. The finger, carried in the direction of the root of the cervix anteriorly, struck against the tumid body of the uterus, and gave pain. The axis of the cervix described an angle nearly right with the line coinciding with the anterior wall of the womb. The tumor above the cervix, constituting the body of the uterus, could be distinctly defined. Pressure upon this latter part occasioned pain; pressure upon the cervix did not cause pain. Having given an appropriate curve to the instrument, I succeeded in passing. Dr. Simpson's uterine sound to the full extent, and felt, by the index-finger of the other hand, that the tumor above the cervix could be moved upwards and backwards from the bladder by means of the sound in the cavity of the organ. This examination left no doubt upon the mind that the anterior paries of the organ was hypertrophied. The right ovary could be obscurely felt through the roof of the vagina, pressure upon which organ causing no pain, the patient lying on her left side. The left ovary could not be defined whilst she lay in this position. Conceiving that posture had something to do with the difficulty of detecting the left organ, she was requested to change the posture, and to lie on her right side. The left ovary could now be defined with the finger with as great distinctness as the right ovary when she was lying on her left side. In all cases I have found it essential to success in the examination of these deeply hidden organs, to regard the influence of position. No evidences of disease in the ovaries could be elicited. No tumor could be felt in the recto-uterine pouch by the finger in the rectum. *Inference.*—Body of the uterus displaced forwards; thickening of the anterior wall; cervix acutely turned forwards, enlarged and indurated; no subsidence of the organ in the vagina. *Speculum.*—Knowing the ante-

the moving valve of the speculum was placed forwards. The cervix readily entered the field of the instrument. The vaginal parietes slightly turgescens; the papillæ and rugæ prominent. The anterior labium of the cervix presented a granular surface, extending half way round; not sensitive to the touch; coated with a muco-purulent fluid tinged with blood; an angry halo surrounded the os, from which, too, a purulent fluid issued. The whole extremity of the cervix gave signs of congestion. The augmented vascularity was explained as the remains of the last menstrual molimen, past only a few days. *Inference*.—Induration and augmented size of, and ulcer on, the anterior lip; the *cavity* of the cervix granular and suppurative. The digestion disordered, appetite impaired, bowels confined.—Ext. Taraxaci, ʒj.; Liq. Calcei, ʒv. fiat Mistura, cujus sumat. cooh. ij. larga ter die.

The granular surface on the external surface of the cervix was treated with the acid nitrate of mercury, the halo around the os being touched with the solid nitrate of silver. In seven or eight days these applications were repeated, leaving the cavity of the cervix for the present untreated. By the succeeding menstrual period the ulceration on the external surface of the cervix had entirely healed. The leucorrhœal discharge had diminished, and the general sense of local suffering had undergone great improvement. There was, however, still a coloured glutinous "appearance," which the speculum readily proved to proceed from the cervical cavity. The second catamenial occurrence having now passed, the diseased state of the cervical cavity was treated by the Potassa cum Calce, as recommended by Dr. Bennett. A cylinder of this caustic was introduced into the cervical cavity, and carried repeatedly round the sides. The digestive system being still somewhat deranged, prescribed—Sodæ Sesquicarb. gr. x.; Tinct. Humuli Supuli, ʒss.; Inf. Cascariillæ, Inf. Corticis Aurant. aa. ʒv. pro haustu ter quotidie; Pulv. Rhei Salin. ʒss. bis hebdomada.

Another fortnight elapsed: discharge had grown less in quantity, and different in quality, more like healthy pus. Warm water vaginal injections recommended to preserve a cleansed state of the passage; tepid baths: and the cervical

cavity was again stimulated by an application of the solid nitrate of silver. The next "period" occurred under decidedly improved circumstances: duration, four days; uneasiness trifling; coagula had disappeared. The healing of the granular halo round the os was proceeding favourably. This part formed, probably, an expression of the degree of cicatrization which had occurred in the interior of the cervix. Nothing further was heard of this patient until the next catamenial period (the third from the commencement of the treatment), which ought to have occurred six or seven days before the date of my visit. On my arrival, in obedience to an urgent summons, I found that the periodical discharge had been deferred for six or seven days, during which time the general distress and local pains had become more and more difficult to bear. A dragging weight in the back, a dull sense of bearing down, a slight distension and tenderness of the hypogastrium, a frequent desire to pass water, constituted the story of her suffering. The speculum revealed a cervix perfectly free from ulceration, but turgid under the catamenial determination to the part. *The outline of the os could be clearly defined, and nothing could be more distinct than the perfect apposition of the lips of the orifice.* It became immediately evident that the edges of the *os tincae* had united together; that consequently the excretory outlet of the uterine cavity had become organically closed; and that the menstrual fluid had accumulated in the interior of the organ. This conclusion received support from the history of the case, and a train of collateral evidence. The anterior wall of the uterus afforded to the finger an obscure sense of a yielding bulge. The cervix had unusually descended in the vagina, and to a depth more than proportioned to its size. The patient fondly cherished the idea of pregnancy, and submitted with reluctance to instrumental interference. The symptoms pointed imperatively to the necessity of affording an outlet to the accumulated secretion. A small spatula was accordingly carried against the line marking the situation of the orifice; other blunt instruments were used in the effort by gentle pressure to effect the separation of the adherent labia, but unsuccessfully. The edge of a long-handled scalpel was now carefully and

gently drawn along the line of the glued aperture, and the point was then carried into the cavity of the cervix in a direction coinciding as nearly as possible with the axis of the neck, and instantly dark grumous fluid escaped, to the amount of an ounce, which was obviously the retained catamenia. The part was then carefully sponged, and the incision enlarged so as to correspond as accurately as practicable in extent with the natural orifice. To prevent the re-union of the edges, a plug of cotton was introduced partially into the cervical cavity, and allowed to hang over the margin of the new opening. This proceeding was neither attended by pain nor much hæmorrhage. On the following day the cotton plug was removed, and replaced by one of Dr. Simpson's sponge tents: and, to avert the repetition of the adhesive process, the incised edges were touched with the nitrate of silver. The menstrual fluid still continued to flow in diminished quantity. Enjoining rest and quiet, prescribing the employment of gentle aperients, the artificial opening in ten or twelve days presented every proof of having retained permanently its patulous state; the margins were cicatrized, and no difference could be detected between the orifice thus established by art and the natural os tincæ. All evidences of leucorrhœa have since disappeared; for the last two "periods" the catamenia have appeared without pain, and the patient altogether enjoys a considerably amended state of the general health.

The preceding case is replete in instruction of practical value. It is by no means published in protest against the practice of treating affections of the cervix uteri by local and direct means. By its publication a beacon may have been raised to mark the direction of mischief. In this case it fortunately happened that the unnatural adhesions implicated only the margins of the uterine outlet. The surgical relief of the case was, therefore, prompt and easy. The possibilities of danger were, notwithstanding, not few in number. The patient might have passed into the hands of another practitioner, to whose mind, from ignorance of the past history, and of the particular treatment adopted, the use of the speculum might not have suggested itself. It is undeniable that delay in the surgical withdrawal of the retained secretion might

have involved the patient in all the grave perils of inflammation of the uterus, its coverings, or appendages. I have yet derived no evidence from actual practice and observation that the *parietes* of the cervical canal are capable of permanently adhesive union from the use of escharotics. The glutinous secretion furnished by the glands of Naboth may be conceived as safeguard enough against the possibility of such an occurrence; but it should not be forgotten that the lining structure of the margin of the os tincæ, to which, in the case above related, the adhesive process was limited, is a mucous membrane, differing in no other respect from that investing the interior of the cervical cavity than in the absence of follicular glandules. Nor does the analogy of the male urethra, under similar circumstances, destroy the possibility of the accident contemplated,—viz., the obliteration of the cavity of the cervix from one end to the other, during the cicatrising stage following the employment of slough-causing escharotics. It is incapable of question, theoretically, that if by corrosion the glandular follicles shall have been deeply disorganised, a lymph forming inflammation attendant on the process of healing, may end in the permanent occlusion of the whole canal. Under such conditions, the construction of an artificial orifice would be beset by many surgical difficulties. What has actually happened, and what may probably occur, in the local management of these diseases, inculcate, therefore, in most significant language, the lessons of caution and diffidence, while they most positively show how easy it is to make bad worse. It must, on the other hand, be unreservedly admitted that accident and abuse ought not to be dignified into an argument, or construed into an objection against the recognition of a principle. The belief rests firmly on my mind, that the local affections of the cervix uteri cannot be cured exclusively by constitutional means, and that the cure, when accomplished by use only of vaginal injections, will ever be irksome and tedious, compared with the prompt and permanent results which follow the *immediate* application of stimulants to the affected part. Although, in his most masterly work,* Dr. Bennett

* On Inflammation of the Uterus, &c., by Dr. Henry Bennett.

affirms that the accident described in this communication does not occur, and never has in his own hands resulted from the use of caustic applications to the cervix, the evidence of this narrative is testimony incontrovertible in favour of the possibility of an event so untoward. Gratitude constrains me here, notwithstanding, to acknowledge that Dr. Bennett, by the publication of his most original work, has rendered lasting service to obstetric medicine. All further progress in the elucidation of the pathological history of the cervix uteri demands that the minute structural anatomy of this region be accurately and clearly determined. This labour devolves as a duty upon those who enjoy the enviable advantages of the metropolitan hospitals. Why does ulceration of this part present such peculiar characters? Is the structure of the cervix erectile, as recently assumed by M. Becamier?—and do the parietes of the uterus participate in this spongy texture? Is the hypertrophy of the fundus, which so very frequently partially, and less frequently *generally*, accompanies the ulcerative indurations of the cervix, a cause of the latter, as supposed by Dr. Rigby, or a consequence of the latter, as maintained by Dr. Bennett? This controversy, which affects the very principles of treatment, might be finally set at rest by determining the anatomical relations of the venous system of the cervix to that of the fundus. If the veins of the cervix *traverse* the fundus in their return to the pelvic trunks, it is evident that an angular *insurrection* upon itself of the body of the organ would strangle only the veins of *one* longitudinal half of the cervix. Under the distended state of the cervical blood channels thus supposed, liquor sanguinis would soon and readily escape into the cells of the surrounding erectile structures, undergo organization, and become the foundation of a disease of protracted permanence. The dome of the uterus is seldom the seat of structural enlargement; the increase of dimensions is, for the most part, circumscribed to that region which lies inferiorly to an imaginary equatorial line, dividing the organ into a superior and inferior hemisphere. Repeated observation has convinced me that there is a relation of constancy between the direction in which hypertrophy occurs in the cervix and that in which it takes

place in the fundus. If the anterior lip and anterior hemicylinder of the cervix become larger than the opposite half of the cervix, it is the anterior wall of the body of the uterus that will suffer enlargement and induration. The two affected ends of a continuous line of structure are thus approximated by the contraction of the inflammatory product with which the structure has become infiltrated. Thus a line carried along the axes of the fundus and cervix would be curved uniformly, such as to present a posterior convexity and an anterior concavity.

The same explanation would apply to the converse disposition of the curve. As far as my experience has extended in the treatment of these intractable diseases, it may be stated that the cure of the induration and enlargement of the cervix is not *necessarily* followed by the disappearance of the same conditions in the fundus of the uterus.

Ulceration of the external surface of the cervix more frequently occurs on the enlarged half, which coincides with the concavity of the curve, than on the opposite. On this side the circulation is more ligatured and impeded, and the incurvated labium of the cervix is brought into mechanical contact with the walls of the vagina. In my hands, in the treatment of cases in which the fundus of the uterus is affected with augmented volume, decided benefit has accrued, in several cases, from the prolonged use of the mixture of the bichloride of mercury and tincture of bark, as recommended by Dr. Oldham, in his valuable essay recently published in Guy's Hospital Reports.

MALIGNANT DISEASE SUPERVENING ON A NON-MALIGNANT GROWTH.

DR. BETHUNE states he has several times alluded to the possibility of a tumor, or other simple growth, remaining for a long time in that state, and then suddenly taking on malignant action: he had lately had a case in point. A man, sixty-five years of age, had had a simple membranous tumor of the conjunctiva for sixteen years: lately this little tumor had increased in size, becoming hard, purplish, and painful, presenting signs of malignant disease; which character was fully established by dissection of the globe after its removal.—*American Journal of Med. Sciences*, Jan. 1850.

RHEUMATIC FEVER. ACUTE PERI- AND ENDO-CARDITIS.

SYMPTOMS OF MENINGITIS.

By EDWARD DEWES, M.D.

Physician to Coventry and Warwickshire Hospital.

JANE LEES, aged 19 years, a strong healthy girl, of florid complexion, came under my care as an out-patient at the Coventry and Warwickshire Hospital, on the 13th January, 1850. Her illness was caused by exposure to cold and damp. She is highly feverish, has intense headache, quick pulse, and loaded tongue. She complains of severe pains in all her joints, which, however, are neither swollen nor red. An emetic was prescribed, four grains of calomel every night, and a saline draught, containing twenty minims of Vin. Semin. Colchici every four hours. On the following day her joints became swollen, red, and extremely painful, in which state she remained for three or four days, the pain shifting much from joint to joint.

On the evening of the 17th, her friends observed a great alteration in her manner: she became restless, talkative, and flighty. She complained of no pain, and the swelling of the joints was nearly gone. On placing the fingers beneath the false ribs on the left side, and pressing upwards towards the heart, considerable pain was produced. The action of the heart was tumultuous, and its sounds muffled, but there was no distinct bruit. Ten leeches to præcordial region; two grains of calomel, and a quarter of a grain of opium every three hours.

Jan. 18th.—Much worse. She has had no sleep, and is so violent that it requires two or three persons to keep her in bed. She is constantly talking, but what she says is incoherent; her sense of hearing is remarkably acute. The right arm is in a constant state of jactitation, so that it is never still for an instant; the right leg is similarly affected, but to a less extent: at times, however, this state becomes aggravated into one of general convulsions of a tetanic character. There is great difficulty of breathing, and severe pain on pressure over the region of the heart. Auscultation discovers a distinct friction sound

and a loud bellows-murmur accompanying the systole of the heart. Pulse 120, firm, and regular.

Venesection to twenty ounces; 12 leeches to præcordia; calomel and opium. Strong mercurial ointment in the axillæ.

On the following day she was nearly in the same state: the blood presented a firm coagulum, covered with a thick buffy coat. Leeches were again applied to the præcordia, and a blister in the evening.

It is needless to give a daily report; suffice it to say, that she continued in the same maniacal state for nine days, during which time she had no sleep. On the 23d, she suddenly jumped up and fell out of bed, her forehead coming in contact with the floor: on visiting her shortly after I found her comatose; but this condition was relieved by the application of a few leeches to the head. The treatment throughout consisted in bleeding, general and local, repeated blistering, and mercurialization: there was, however, great difficulty in bringing the system under the influence of the mineral, but as soon as this was fully accomplished the severe symptoms were materially alleviated.

February 13th.—The patient is convalescent, and says that she feels quite well, with the exception of severe palpitation and dyspnoea on exertion. The friction sound remained audible for two days only, and as its cessation was not followed by any increase of dulness on percussion, indicating effusion of serum into the pericardium, we must conclude that adhesion, more or less extensive, has taken place between the opposite surfaces of the pericardium. The systolic endo-cardial murmur is still very loud at the base of the heart, and thence becomes weaker and weaker as it is followed upwards along the course of the aorta. In this situation it is of the *soft bellows* character, and is heard as far as the subclavians, but not in the carotids. On tracing the murmur from the base downwards towards the apex, it becomes louder and louder, and has a distinct *rasping* character. It is audible far below the apex of the heart, is very loud in the left axilla, and in the scapular region. It is therefore evident that the mitral valve has suffered great and irreparable injury, and that the aortic is not altogether free from change.

The length of time during which the

right side of the body was affected with tetanic convulsions, namely, eight days, caused serious apprehension lest the membranes of the brain had become attacked with inflammation: but the resemblance of the symptoms to those of cases recorded by Andral, Latham; and others, in which, after death, the brain was found remarkably free from disease, led to the conviction that no such complication existed.

CASES OF
ASCENDING OR INTERMUSCULAR
HERNIA.

WITH OBSERVATIONS.

BY JAMES LUKE, Esq.
Surgeon to the London Hospital.

THERE is a variety of inguinal hernia apparently not generally known to surgeons, which I venture to designate as Ascending or Intermuscular, (for reasons which will appear in the sequel), to which I am anxious to draw attention through the medium of the MEDICAL GAZETTE, from the circumstance that it is liable to cause some difficulty in diagnosis, and when strangulated to become a matter of more than usual interest and occasional embarrassment.

To illustrate the subject it is proposed to relate a few cases, which partake of the same general character, although they exhibit modifications of sufficient interest to be noticed in the description. Before relating those cases, I propose to give some account of the form of hernia to which they relate, that a clearer understanding of its mode of formation may be obtained. In doing so, it will be needful to recollect the recollection of the reader the relations which a hernia, in the most common form, bears to the inguinal rings and canal through which it descends, because the immediate subjects of this communication are examples merely of deviations from those relations.

It will be remembered that an inguinal hernia of the ordinary kind, after issuing from the abdomen through the internal ring, *descends* in the inguinal canal in front of the spermatic cord in the male, and of the round ligament in

the female, from whence it passes through the external ring to the scrotum in the former, and to the pubes in the latter.

A hernia, however, at its exit from the abdomen, is liable to be pushed aside, or have its course altered, by any opposing obstacle; for its tendency is always to pass in that direction in which it meets with least impediment to its course. In the cases before us such impediments do occasionally arise, and more particularly in the female; a circumstance attributable to the lesser anatomical development of the canal and external ring in that sex, from which probably proceeds the more frequent occurrence of the form of hernia mentioned below. In the male sex the canal and rings are sufficiently large to allow of a hernial descent, so that we continually observe that the direction of an inguinal hernia in the male is downwards, unless it be turned aside, or its direction altered by artificial means, and especially by the pressure of a truss. In the female, however, natural obstacles occur in the downward direction; it therefore sometimes happens that the lesser impediments to the progress of a hernia lie in an upward or outward direction, in which case the tumor, after passing from the internal ring, turns towards the ilium, and becomes interposed between the layers of abdominal muscles above and on the outside of the ring. Such hernias are covered anteriorly by the internal oblique muscle, and bear nearly the same relation to the tegumentary surface as an ordinary hernia confined to the inguinal canal, but differ materially from it in its relation to the internal ring. The tumor lies nearer to the ilium in this form of hernia, in a position which, being not usually occupied by hernia, may give rise to some difficulty in diagnosis, and may through inadvertence be mistaken for some other disease, either of the cæcum on the right, or colon on the left side. It also lies somewhat buried, when small, under a covering of muscular structure, and occasionally under an accumulation of adipose tissue, and may on that account be passed over altogether without notice. In its position it constitutes the kind of hernia which I have named above. It is important that such cases should be well understood; and the relation of the following cases will probably help this matter. Although not

the first, the most perfect specimen of the kind of case referred to in the foregoing observations, occurred to a person about 60 years of age, residing in the neighbourhood of Bethnal Green. She was of a thin spare habit, and when I first saw her, had suffered during four days from obstruction of the bowels and sickness, the symptoms having increased in severity up to the time of my visit. On the day previous, a fulness had been observed a little to the inside of the right spine of the ilium, which had not been noticed during the two first days of her illness, and was supposed to be connected with the cæcum, from the circumstance of its position and apparent depth. When I examined the part very carefully, it appeared to contain an ill-defined tumor, lying deeply, but within the walls of the abdomen, and not within the abdomen itself. Its position was to the outside of the situation of the internal ring, with its inner side resting upon the ring. It was somewhat rounded in form, and painful on pressure. Connecting it with the existing symptoms of intestinal obstruction, I concluded that it was a hernial tumor in a state of strangulation, and advised an operation, in the performance of which, the integuments were incised perpendicularly over the tumor, and consequently on the outside of the internal ring. The abdominal tendon being divided, the tumor was brought into view, covered by the lower border of the internal oblique muscle. It was about the size of a pullet's egg, and had the ordinary characteristics of a strangulated hernia, but with its neck of communication with the abdominal cavity at its lowest part, this being at the internal ring, where the stricture upon the contents was found, apparently produced by its margins. These were divided without opening the sac, and the hernia reduced within the abdomen. Relief to the symptoms of obstruction speedily followed this proceeding, and recovery gradually, though slowly, took place, it being delayed by circumstances unconnected with the hernia.

The next case came under my notice in consultation with Mr. Byles, in a female between 50 and 60 years of age, suffering from acute symptoms of intestinal obstruction, attended by peritoneal inflammation and abdominal tension. She was the subject of a mode-

rate-sized umbilical hernia, which was irreducible, without impulse, and inflamed. On examining the lower part of the abdomen, there was discovered a small tumor on the left side, lying deeply under a thick covering of fat, and exteriorly to the usual seat of an inguinal hernia. It was painful when pressed. It was considered to be a hernia, and in a state of strangulation, although some doubts were entertained whether the umbilical hernia was not really the one strangulated. An incision was made through the abdominal tendon, which exposed to view a small tumor, lying as in the former case exteriorly to the internal ring. When the sac was laid open, its communication with the abdomen was found to be at its lowest part, and the intestine so tilted upwards over the upper and outer margin of the internal ring which formed the stricture, that some difficulty was experienced in getting at the part which is usually divided for its relief. This division being accomplished, the hernial contents were reduced into the abdomen, and the wound closed. This patient had a good recovery. At a distance of five weeks from the operation she was seized with apoplexy, and died.

A modified form of the same kind of hernia came under my notice in a post-mortem examination of a patient who had been operated on by the late Mr. R. C. Headington, formerly an upright and distinguished surgeon to the London Hospital. The subject was a female, about 60 years of age, and the operation was performed in the London Hospital. The hernia, I was informed, presented the ordinary appearance of an inguinal hernia of the left side, descending upon the pubes through the external ring. The requisite incisions were made over the tumor, and the lower part of the sac laid freely open. Of the seat of stricture I was not informed. When efforts at reducing the hernial contents were made, they were attended with apparent success; but, on remitting the effort, the contents returned to their former place in the sac. Renewed efforts were attended by the same results; and, after being several times repeated, with each time a recurrence of the descent, were finally abandoned, and the contents were allowed to remain unreduced, the wound being closed over them. The patient shortly died.

On dissecting the integuments from the lower part of the abdomen, the opened hernial tumor presented below the external ring in the usual manner, and was readily traced to its communication with the abdomen at the internal ring, but it also extended in a direction towards the spine of the ileum beyond the ring, and between the layers of the abdominal muscles. Thus the sac was found to be far more capacious than was suspected before death; and the circumstances attending its relations to the abdominal aperture explained the difficulty which had occurred during the operation. The hernial contents, when apparently reduced into the abdomen, had not been so in reality, but had been transposed from one part of the sac, and that the lowest, to the other or upper, which lay *above and to the outside* of the internal ring. No difficulty could arise in such a case in respect to diagnosis of the existence of hernia, yet to the operator an embarrassment might ensue like to that which occurred in this; and its relation is of importance, as forewarning him of a probable though remote contingency, and preparing him, by a foreknowledge of it, with the means best suited to meet the difficulty.

These cases, even in the female, are unfrequent; they are still more so in the male, and, I believe, never occur in that sex, unless produced by means wholly independent of anatomical formation and development. They may, however, be produced by other causes; and the subject has an important bearing upon the application of trusses to the relief of the ordinary kinds of inguinal protrusions. From the manner in which a truss is usually applied, and from the sufficiency in the size of its pad, both the internal and external inguinal rings are guarded, and the more especially when the two are approximated by the descent of the former, as is common in old hernia. But in an incipient hernia, when the rings are in their normal position, or nearly so, a truss may be so applied as to guard the external ring and lower part of the inguinal canal only. In that case the hernia is not prevented from protrusion through the internal ring; and its increase in size may continue, notwithstanding this imperfect use of the instrument. If such increase does take place, the truss has no other effect

than to alter the course of the hernia by preventing its *descent* through the canal and external ring, and constraining it to take that direction which alone is open to it. That direction appears to be upward and outward; and thus the intermuscular hernia, as described above in the foregoing cases, is produced. To prevent such a form of hernia in a male, arising from the use of a truss, is an important desideratum, and appears easily attainable by its proper application. As the occurrence is the result of pressure of the pad upon the lower part of the canal and external ring, while the internal ring remains unguarded, there are two courses open for selection. The one course is to remove the pressure of the truss altogether, by which means the hernia will have an opportunity of descending in its usual course: the other is to guard the internal ring also, and to prevent protrusion from the abdomen altogether. Of the two it need scarcely be observed that the last is to be preferred. Although this is generally done, it is not always so; and it may serve a good purpose to show what may take place, and what has taken place, from inattention to this deficiency in the application of trusses. They should always be so applied as to guard the *internal ring*.

An illustration of the above came under my notice a short time since, in the case of a gentleman, about 50 years of age, who first applied to me in consequence of some uneasy feelings which he experienced in the abdomen, and irregular action of the bowels, attended by occasional flatulence and nausea. He also complained of pain in the region of the cæcum, in examining which and the adjacent part it was found that he was the subject of hernia. This had descended partially into the scrotum; but he had been in the habit for some years of retaining it by means of a truss. A much larger tumor occupied the space between the crest of the ileum and the usual seat of the internal ring, which, by the communication of impulse, was ascertained to be connected with the lower tumor. Thus it was found that the entire hernial sac was of very considerable dimensions, and contained a large mass of viscera. Probably to this circumstance was referable the symptoms of intestinal derangement which were the immediate

cause of his application. It became, therefore, an object of primary importance in the treatment that the contents should be replaced within the abdomen. In the attempt to accomplish the reduction the lower tumor was readily made to disappear; but, as it did so, the upper tumor became more full and large. Attempts at reduction of the upper tumor in the upward direction were wholly unavailing; but, when pressure was made upon it in a direction downwards, in the course of the inguinal canal, while the other hand was kept upon its lower extremity, so as to prevent the contents from descending through the external ring, it was, by a little manipulation, partially returned into the cavity of the abdomen. Old adhesions of the contents, either to each other or to the sac, appeared to be the obstacle to the reduction being complete. Sufficient, however, was accomplished to afford some relief to the patient, and the intestinal disturbance became less severe. Should strangulation occur in this case, the circumstances which complicate it are well calculated to try the skill of the most experienced surgeon who shall undertake an operation for its relief; all which complication, with all its present ills and prospective embarrassments, I think, might have been prevented by the proper use in the right position, and at an early period, of an efficient truss.

39, Broad Street Buildings,
March 1, 1850.

POISONOUS EFFECTS OF MERCURIAL VAPOUR IN A HOSPITAL.

THE ward No. 8 of the Marine Hospital at Rochefort is one of the largest in the establishment. It measures about three hundred feet in length, by forty in width, and contains ninety-five beds, which are occupied by fever cases occurring among the galley slaves. Five, however, of these beds are appropriated to agents of police. During the summer of 1846 it was discovered, that notwithstanding the utmost care, and that the bedsteads were made of iron, the ward was infested with bugs to such an extent that the patients could get no rest. Owing to the crowded state of the hospital it was at that time impossible to take the requisite steps for ridding the ward of the vermin. It was not until the month of November that the patients could be transferred to another ward, and the thorough cleansing of the bedsteads, &c. be effected. These were then thoroughly fumigated with mercurial vapour, which had been found of

great service in other wards, and had not been attended with any subsequent ill effects.

On the 13th December forty-three patients were removed to this ward. The day was cold, the thermometer standing at 80° Fah. in the open air, and in the ward at about 43° Fah.

When Dr. Lefevre visited the patients thirty-nine hours after their return to the ward, many among them complained of heat of the mouth, tenderness of the gums, and salivation. On the following day the number of these cases had increased; and the ward was consequently evacuated. On the 18th, it was found that thirty-nine out of the forty-three patients had been attacked by mercurial salivation. In some cases it assumed a severe form. Diarrhoea occurred to some simultaneously with the appearance of salivation. After the 19th no fresh case occurred.

The supervention of this mercurialization exerted no influence on the pre-existing disease of the patients. The accessions of intermittent fever returned with their previous regularity. The affections consequent on ague, and which are numerous at Rochefort, were in no degree modified.

Of the four men who escaped the salivation, one was suffering from acute tonsillitis; a second, from chronic hepatitis; the third, from quotidian ague; the fourth, from chronic bronchitis.

The five agents of police who were present as guard over the convicts, and who were not confined to the ward during the whole twenty-four hours, were not affected by the vapours. The sisters of charity, also, who breathed a pure air during the greater part of the day, escaped its influence.

It is impossible to ascertain the quantity of mercury received by each patient: it must, however, have been very small, from the warming and ventilation to which the ward had been exposed previously to the re-admission of the patients, and because from the lowness of the atmospheric temperature, the volatilization of the mercury which remained, attached to the walls, furniture, &c., would be retarded.

After the evacuation of the ward it was purified from remaining mercury, by heat, chlorine, ventilation, whitewashing, painting, &c.

After three months other patients were admitted without experiencing any ill effects except those which arose from the reappearance of the bugs in the summer months, and which again infested the beds as badly as at first, showing that the mercurial vapour had been powerless to destroy bugs, but powerful to injure man.—*Journal de Chimie Médicale*, 1849. X

MEDICAL GAZETTE.

FRIDAY, MARCH 15, 1850.

PROPOSITIONS are occasionally started by a humane section of the public or profession which take us by surprise. While the charitable endowments of this country exceed in extent and munificence those of any other kingdom or empire, it is a fact that we are in general the last to adopt improvements the value of which has been fully recognised elsewhere. Not long since, we had occasion to point out the establishment of an Asylum for Idiots in the metropolis, in imitation of the example of other countries. It is to our national credit, however, that the moment an appeal, founded on justice, humanity, or the reasonable claims of the sick poor, is made to the public, funds are in general provided: a new institution for the relief of a sick and impoverished class springs up, and, by the gratuitous aid of the profession, it leads to the dispensation of a large amount of good.

Among the benevolent projects of the day, we have now to notice the proposed foundation of one which has peculiar claims upon the support of the public and profession: on the former, by its tendency to diminish the great mortality from preventible causes among the infant population; and on the latter, by its throwing open a school of instruction the necessity of which has been long felt, and the value of which cannot fail to be recognised by all philanthropists. We allude to the foundation of a HOSPITAL FOR SICK CHILDREN in the vicinity of the metropolis. It is certainly an extraordinary fact, that while in Paris, Frankfort, Berlin, St. Petersburg, Moscow, Vienna,

and other great continental cities, there are hospitals set apart for the exclusive reception of sick children, there should be no such institution in London, and that the proposition for establishing one should for the first time come before the public in 1850. It must be remembered, however, that it is the uniform policy of the British Government to allow all charities to originate with the public; and, further, to throw their support entirely upon the pockets of the benevolent. On the Continent the case is widely different: we do not there see on the walls of the infirmaries the words "supported entirely by voluntary contributions," so frequently seen in this metropolis, — an announcement which means literally "the Government will lend us no support." On the contrary, these continental charitable institutions are in general founded at the expense of, and almost entirely supported by, the respective Governments. The medical officers are also, as a general rule, paid for their services. Here, however, the public must find the means of endowing such establishments, and medical men must give their professional assistance gratuitously. Although the Chancellor of the Exchequer, as the columns of our contemporary the *Times* testify, is almost daily receiving from unknown or anonymous defaulters the halves of fifty and one hundred pound notes, as alleged repayment of taxes, conscience money, &c., we never meet with a paragraph setting forth that even ten pounds thus extorted from an awakened conscience, has been bestowed by the said Chancellor on any one of those numerous charitable institutions which are struggling for funds, and are often obliged to close some of their wards against the sick poor from actual want of means. It has often struck us that a portion, if not the whole, of these conscientious contributions, which, judging by the

almost daily acknowledgment of them, must amount annually to an enormous sum, could not be better bestowed than upon those hospitals or infirmaries which do not happen to be richly endowed. The consent of Parliament is easily obtained to the distribution of large sums for purposes much less worthy than that which we are now advocating—*e. g.* the support of the Polish refugees and other revolutionists.

It appears to us that, even if these benevolent projects are allowed to originate with the public, it is the duty of a humane Government to lend them support until so far fixed in public opinion as no longer to need pecuniary aid except from the charitable. On the continental hospitals for sick children, a pamphlet now before us contains the following remarks* :—

“Moreover, not one of these institutions has been found to fail of the benevolent object for which it was established; but, on the contrary, all have flourished, and are flourishing, and some have been the first-fruits of voluntary effort on the part of the inhabitants of cities where formerly nothing had been attempted except by the order and under the direction of the Government.

“To follow, then, where they cannot lead, and to emulate the noble example of the people of other lands in this most excellent work of charity, a Provisional Committee has been formed for the purpose of *establishing in London a Hospital to contain 100 beds for sick children between the ages of two and twelve years*; and towards this object they now appeal to a benevolent public for assistance.”

We are further informed that—

“There exists in London only one Dispensary for the special treatment of the diseases of children; and neither in this city nor throughout the whole British Empire is there any hospital exclusively devoted to their reception. At the same time, the number of children received into the general hos-

pitals is so small, that out of 5538 patients contained in those institutions in London at the time of the last census, only 8·5 per cent. were children under ten; and of them it may be fairly estimated that at least half had been admitted on account of some accidental injury, and not for the cure of any of the diseases peculiar to their age.”

Although it is scarcely necessary, so far as medical readers are concerned, to enforce the importance of this appeal by the display of statistical results; yet it may be well to quote from the report some remarks on the infant mortality of the metropolis, and the small reduction which has taken place in it during the last fifty years:—

“It appears from the last Report of the Registrar-General, that out of nearly 50,000 persons who died in the metropolis in the year 1846, more than 15,000 had not attained the age of two, and more than 21,000 had not attained the age of ten years. An equally striking illustration of the high rate of mortality in early life is furnished by the statement of the same authority, that of 100 persons born in London, 24 die during the first two years of life, and nearly 11 more during the eight succeeding years; so that 35 per cent., or more than a third of the whole population of this city, are cut off during infancy and childhood.

“It is no longer necessary to urge the importance of such facts as these upon the attention of the public; for the evils of which they are the expression have now for some time engaged alike the cares of Government, the investigations of science, and the efforts of philanthropy. Their combined endeavours have already effected an amount of good which it would be impossible to estimate with accuracy, though an increase of nearly seven years in the average duration of life in the present, as compared with the past century, may be appealed to as some proof of its reality. This result, however, will appear as little else than an earnest of what may be hoped for from more continued and better directed exertion, if we bear in mind that it is chiefly during the period of manhood, or else in the first year of infancy, that this diminution in the rate of mortality

* An Appeal to the Public in behalf of a Hospital for Sick Children. 1850.

has been effected, and that the proportion of deaths in childhood is but little less than it was fifty years ago. The London bills of mortality for the last half of the eighteenth century show that 46.1 per cent. of all deaths were of children under ten, and 32.6 per cent. of children under two years of age; while the returns of the Registrar-General for the seven years 1838—1844 prove the mortality in this metropolis under ten years of age to amount still to 44.2 per cent., and under two to 30.1 per cent. of the mortality at all ages.

A diminution of only 2 per cent. in the mortality of early life, during a period of fifty years, remarkable not only for the general advancement of science and art, but also for the increase of medical knowledge and the discovery of vaccination, must be looked on by all rather as a summons to greater effort, than as affording ground for self-gratulation at what has already been accomplished."

The suggestion at present is to confine the institution to 100 beds. This is intended as a beginning; for it is obvious that a hospital of so limited an extent for a metropolis of upwards of two millions of inhabitants, would go but a little way to carry out the benevolent intentions of the projectors. It is calculated, however, that the proposed plan will provide for the reception of nearly 800 children annually.

The number of children received into our hospitals for the treatment of special infantile diseases is small, probably owing to the fact that "the diet, the treatment, the nursing, and the hours to be observed, are all different from those suited to a hospital for adults." The opening of children's wards in our large public hospitals can be attended with but little benefit, unless provisions are made similar to those on which it is proposed to found the new Children's Hospital. These are—

1st. A situation sufficiently remote from the crowded parts of the metropolis to insure to the inmates of the building the advantages of pure air and good ventilation.

2d. A site sufficiently spacious to allow of the formation of a garden or play-ground for the exercise and amusement of those children who are convalescent.

3d. A building so arranged as to provide for the complete separation from the rest of any children suffering from contagious fevers; and to contain distinct wards for convalescent children, in order that the quiet necessary for those who are seriously ill may be undisturbed.

We are informed that the fulfilment of these conditions has been found by experience to guard against any excessive mortality among the inmates,—a circumstance which has been hitherto regarded as a powerful argument against the institution of hospitals for children. We observe upon the Committee the names of Dr. George Burrows, Dr. Robert Ferguson, Dr. Benze Jones, Dr. Latham, and Dr. West. The support of such men is likely to guarantee success.*

USELESSNESS OF MEDICINE IN THE EARLY STAGE OF PHTHISIS.

BUT little is to be obtained by the employment of drugs in the early stage of phthisis. It is best to avoid their use. If a cure is to be accomplished, it is by the aid of hygienic measures. This was the opinion of the late Dr. Parrish, based upon a long experience; and in a recent conversation with the venerable Dr. James Jackson, of Boston, than whom it would be difficult to find a higher authority, I was happy to learn that similar views were entertained by him. Riding on horseback, agreeable diversion of mind, free from excitement, the pure air of the country, moderate exercise on foot, not carried to fatigue, but above all, removal to a genial climate and atmosphere, are important elements in the successful treatment of this much-dreaded disease.—*Dr. Hallowell, in American Journal of Medical Sciences, Jan. 1850.*

* It is proposed that a donation of thirty guineas shall constitute a Life Governor, and an annual subscription of three guineas an Annual Governor. Information on the subject may be procured by application to Mr. Humphries, at the Office, 32, Sackville Street, Piccadilly.

Ætictos.

The Hunterian Oration for 1850. By FREDERIC C. SKEY, F.R.S. &c. &c. Pamphlet, 8vo. pp. 44. London: Churchill. 1850.

"There is no other real source of greatness than that arising either from intellectual or moral pre-eminence. Dignity of noble birth, or the possession of wealth as sources of greatness, are the mere conventionalisms of the world. There nature is extrinsic—not inherent. They may be said to be rather the representatives of greatness than the possessors of it. Great and good deeds infer either intellectual or moral superiority. The professors of medicine, estimated by their *unpaid* services rendered to the world, are among the greatest benefactors to mankind."

With this quotation from the author's preface we introduce this very admirable address to the notice of our readers. The sentiment therein expressed is the key-note of the entire composition. The end and aim of the Oration are the exaltation of the medical profession by an appeal to the highest and best feelings of its members,—by an earnest endeavour to arouse and foster those motives of self-respect which shall "exalt the aim of life above that low and sordid level which limits our aspirations to the pursuit of gain, and presents no object of nobler attainment than a name for professional skill." Sentiments these, worthy the occasion of their utterance; for how could the orator more justly honour "the genius of Hunter" than by promoting the welfare of that profession to which himself and others of kindred spirit had devoted their lives?

The character and memory of Hunter are too deeply written and too carefully enshrined in the profession of medicine and surgery to require at this day a very long eulogium: it is well, therefore, that the Hunterian orators of late have rather sought to pay to his memory an indirect tribute of eulogy, by the display of every topic which can add lustre to that science which is, in every sense of the word, Hunterian. Mr. Skey, in his eloquent, elaborate, and bold address, has imbibed the full spirit of his hero, and has not fallen short of the excellence of the most illustrious of his predecessors.

The moral beauties of Hunter's character are aptly brought into just prominence in an oration the object of which is, as we have said, the exaltation of the moral rather than of the scientific character of surgeons. It is also, when viewed in this aspect, that the character of Mr. Clift is brought forward by Mr. Skey, invested in attributes no less bright than those of JOHN HUNTER. There are few who knew WILLIAM CLIFT who will not concur in the opinion "that he was great because he was good."

The memories of Key, Andrews, Morton, and Pennington, meet also with their appropriate tribute of respect at the hands of Mr. Skey.

It has ever been one of our main objects, in the performance of the duties which have devolved upon us, to uphold the moral character, equally with the scientific and practical character of our profession, and we hail with gladness the efforts in the same direction of every fellow-labourer. It gives us pleasure to think, then, that Mr. Skey has done essential service by boldly and unflinchingly proclaiming that it is not by the levelling of class distinction, nor by legislative enactments, that the profession will become renovated, and attain that degree of respect to which its intrinsic worth entitles it; but it is by the *personal character* of each individual member.

Mr. Skey traces four causes of the present depressed condition of the profession: 1. The want of high-classed education; 2. The low standard of medical ethics; 3. The present imperfect state of the law; 4. The absence of public and national honours.

With reference to the *first* point, we think the best friends of the rising generations of surgeons cannot but desire for them "the adoption of an improved system of training, which, while perfecting students in the practical knowledge of their art, shall also aim to imbue them with those amenities of literature and a cultivated taste which give grace and dignity to social life, and should be the distinguishing characteristic of a profession like ours."—(Preface.)

It is but little to the purpose that a man may be able to dissect a dead body, and learn its structure, unaided by a knowledge of the original writings of Galen,—may ultimately become a

tolerably good bed-side practitioner, without the slightest acquaintance with the classical writings of Greece or Rome: the fact does not disprove the beneficial influence of such knowledge, early acquired, on the development of the mental powers. There is no calling in which the perfection of these faculties is more imperatively demanded than in the medical. There is no profession in which so large a number, if it were possible to collect their confessions, would be found to have daily cause to lament their early want of classical and general education, as among the class of general practitioners. Convinced, therefore, of the absolute necessity of increased education, we cordially concur in the following observations on the recent requirements of the College in reference to this very point:—

"I conceive that education is required by all, whether rural or metropolitan; but in every grade his general acquirements as to his competency for this high pursuit should be tested by actual examination; and I rejoice to think that the Council of this College, under the superintendence of its distinguished President, who have at heart the earnest desire to promote the highest interests of that department over which they preside, have acknowledged the necessity by taking the initiative on this subject, and instituting examinations in classical and mathematical knowledge for all future junior candidates for the rank of Fellow of this College: and on this head I have only to express my regret that this important requisition is not made referable to the *first* rather than to the *last* stage in the career of the student." (p. 25.)

This is truly "an important requisition," and one that will go far to restore Medicine to the rank of a learned profession,—a consummation the more "devoutly to be wished," inasmuch as some of its brightest ornaments and most successful practical cultivators have been distinguished as men of learning.

In approaching the consideration of the second cause, we are fully prepared to bear out Mr. Skey's views with regard to the ethical relations of our profession. "Do I wrong our profession," is his plain question, "when I say that there is a want of tone; a jealousy of the exertions as well as the success of others; a tendency to misconstrue good, or to suggest evil motives; the absence

of that enlightened spirit that marks the gentleman of education?" To this the answer must be, on all sides, obvious.

Mr. Skey justly compares the professions of law and medicine with regard to those ethical rules and regulations of etiquette which control the intercourse of members in each. It is doubtless incontrovertible, that a profession artificial to a great degree, and too often dealing with untruth, has "more stringent conventional refinements," and those are more closely observed, than that profession which has "truth for its field of action, good for its aim, the world for its study." This should not be—it need not be: if more pains were bestowed upon early education of the *best kind*, a clearer perception of moral right and wrong would become universal among us, and the "golden rule" would be the rule of our conduct toward each other.

In treating his third cause, Mr. Skey has expressed himself in words at which some have needlessly taken umbrage:—

"The general practitioner is an ambiguous link between a profession and a trade." (p. 29.)

There is here little ground for taking offence, that we can perceive, except that it may not be always pleasant to hear the plain truth. If taken alone, these words might seem invidious; but taken with their context they do but state an evil to which others have already attributed much of the degradation of the profession, and express only the existing desire "for an improved system of remuneration, and one more consonant with *professional* usage, which, if sanctioned by Parliament, would be generally acceptable to this large department of the profession of medicine."—(Preface.)

"It is general practice," Mr. Skey remarks, "that gives the stamp to the whole;" and he then proceeds to show that the system of remuneration which has prevailed, but which, we believe, is gradually dying away, is one "the objections to which cannot be overcharged"—that it is a system under which "it is impossible in many cases for the medical attendant to be remunerated but by the resort to means which high principle must proclaim in his own breast to be indirect and even disingenuous." The objections to this

most objectionable "system" of trading in physic are ably urged by the orator. We quote one more passage:—

"If there exist one feature more injurious than another to the rank of the general practitioner of England, and the persistence in which presents a more fatal obstacle to the success of any attempt to ameliorate his condition, it is that which places a pecuniary value on the drugs he dispenses. With quite as much reason might the surgeon claim compensation, in the name of the instruments he employs, for their services after an operation." (p. 31.)

The class of practitioners to whom Mr. Skey here addresses himself respectfully but boldly, advising them to their best interest, will, we sincerely trust, be thankful to that gentleman for having espoused their cause, and shown his desire to assist in elevating them from that degraded state which they have undoubtedly hitherto held, which has rather arisen out of the gradual transition through which they and their predecessors have passed from the condition of the humble *apothecary* of former days, and so become for a time inevitable, than from any want of high feeling or desire for emancipation on their own part.

In discussing his fourth cause, Mr. Skey forcibly propounds and advocates the claims of the profession to a share of those public honours which have never been withheld from divinity, arms, law, but to which medicine may fairly urge the title of "*eminent superiority*."

In concluding his address, Mr. Skey dwells, in a strain of the highest eloquence, and in language which, as we can testify, held his audience fast by the ears, on the advantages which accrue from the cultivation of *refined taste*.

"By taste," observes Mr. Skey, "I mean simply the power of appreciating beauty in any form, whether in nature or in art, and the cultivation of which, forms, I conceive, an important and a valuable substitute for more profound pursuits, but to which it may be superadded, with still greater advantage to its possessor. Good taste and good feeling are found in daily companionship with each other, and without its development in some shape or other, a blank is left in the circle of man's most refined enjoyments, while even his intellectual frame-work is incomplete and mutilated." (p. 38.)

We have devoted to this Hunterian Oration a considerable space, on account of its own merit, which places it in a high position as a literary composition; as well as on account of the immense importance at the present time of the topics which are so ably and temperately discussed in it. We trust, for the good of the profession, that it may be diligently studied by every medical practitioner.

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An Inquiry into the Degree of Certainty in Medicine; and into the Nature and Extent of its Power over Disease. By ELISHA BARTLETT, M.D., Professor of the Theory and Practice of Medicine in Transylvania University, &c. &c. 8vo. pp. 85. Philadelphia: Lea and Blanchard. 1848.

The science of medicine has found a powerful advocate in Dr. Bartlett. If, indeed, there be so little certainty in medicine as we are told by some; if it be "all guess-work," as we are assured by others; then are its practitioners chargeable with gross ignorance, or, still worse, gross imposture; then are they bound by all the obligations of morality to abandon its practice, or to join themselves to any sect of quackery which they may think has strongest claims on theirs and their patients' credulity. But, with Dr. Bartlett, we distinctly and indignantly repudiate the charge. We are not willing to impute such ignorance or dishonesty to the great men whose names are registered in our Esculapian temple, from Hippocrates downwards. Neither are we, if we were willing, able, to forget the results we have witnessed as the direct consequence of means skilfully employed against the most severe and dangerous maladies.

But we must not presume to take the place of Dr. Bartlett, whom it is our duty and our desire to introduce to our readers in the following prefatory remarks:—

"The interests of truth, of our profession, and of humanity, alike demand that the legitimate claims of medicine to the regard and confidence of mankind should be vindicated and maintained. And this is the task I have set myself. I wish to show, as clearly and positively as I can, the nature and the degree of certainty that belongs to medicine as a science, and as an art. In doing this I shall deal but little

in general assertions unsustained by positive proofs, and not at all in empty and vague declamation; I shall state the reasons of the faith that I profess, and I shall exhibit the evidence upon which it rests." (p. 11.)

The author first points out, with regard to anatomy and physiology, that although, in common with other branches of human inquiry, these sciences can hardly be considered as complete, yet that their "degree of completeness is as satisfactory as it is in any of the natural sciences, and that it is daily advancing." (p. 16.)

In defending the department of therapeutics and pathology, against which the charges in question are usually preferred, Dr. Bartlett observes—

"I shall endeavour to show the nature of our knowledge of disease,—its extent, and its degree of positiveness; I shall endeavour to show how far, and with what measure of constancy, we are able to control, to mitigate, and to remove disease." (p. 18.)

Taking pneumonia as the most suitable form of disease for the object in view, the author first examines the anatomical lesions attending that malady, and points out, with strict truth, that these have been carefully and positively shown to be constant. In the same way Dr. Bartlett treats of the symptoms, both rational and physical: with reference to the latter, we may quote a portion of the author's remarks:—

"We know the precise moment of time when the air-vesicles are so blocked up that no air passes into them; and the precise moment, also, when they are again opened to admit it. The roar of conflagration does not mark more clearly the passage of the raging element from chamber to chamber of a burning house, than does the fine dry crepitant roushus the presence and march of inflammatory engorgement of the lungs."

Having traced the powers of medicine in the treatment of pneumonia, the author embodies the results of his examination in the two following propositions:—

"First. The science of medicine, so far as pneumonia is concerned—although, like other natural sciences, still unfinished and progressive—is, to a very satisfactory extent, settled and positive: the principal phenomena and relations of this disease have been well and accurately ascertained; its natural history is, in a good degree, and to a considerable extent, complete.

"Second. Medical art, so far as pneumonia is concerned—although not endowed with absolute and unqualified power—is still of great and unquestionable utility. Through the agency principally of blood-letting and antimonials, as its most active means, it lessens the severity of the disease, shortens its duration, and, in many instances, prevents its termination in death." (p. 55.)

We consider that Dr. Bartlett has acted the part of an impartial judge rather than of the prejudiced advocate, in selecting for his principal illustration the subject of pneumonia. Other diseases, in which more unvarying success and more striking results are seen, might have been chosen by the author; but, certainly, permanent solidity would have been sacrificed to present advantage.

Dr. Bartlett admits the less complete state of our knowledge in respect of many other diseases than of pneumonia. These are more obscure and complex in their nature, are of less frequent occurrence, or are of less fatal tendency, and have hence received less minute examination. In order to render his demonstration complete, the author briefly indicates, so far as the present state of science permits, the actual power of medicine over all the principal forms of disease. For this purpose, the author arranges diseases into certain family groups.

"The first group consists of diseases of slight or very moderate severity, rarely endangering life, and terminating almost always spontaneously, after a few days continuance, in health. Amongst them, and as representations of the class, I may mention common catarrh, simple acute diarrhoea, and simple jaundice." (p. 61.)

"There is another group pretty nearly allied to the former in some respects, and differing considerably from it in others. The diseases belonging to it are somewhat graver than those of the first group, though they rarely destroy life. Functional dyspepsia, chorea, and chlorosis, may be mentioned as members of this family." (p. 62.)

In the third group are included sporadic dysentery, simple acute rheumatism, acute pleurisy, tonsillitis, catarrhal croup, &c.

The fourth group embraces the more serious local inflammations, and all the general fevers—continued, periodical, and exanthematous; whooping-cough, Asiatic cholera, erysipelas, and delirium tremens.

A fifth group

"Is constituted by a most formidable and appalling catalogue of diseases, having no tendency to a favourable termination; but little, or not at all, under the control of remedies; and self-limited only by death. To this class belong hydrophobia, epilepsy, traumatic tetanus, scirrhus and cancer, softening of the brain, tubercular meningitis, phthisis, membranous croup, diabetes, albuminuria, and various structural lesions of the heart and other viscera. Most of these diseases are, in the present state of science, beyond the reach of medicine,—some of them nearly, others absolutely so." (p. 68.)

The author, in his remarks on these several groups, estimates their relative amenability to remedial measures. We, to the fullest extent, concur in his general conclusion, that although in many instances the tendency is to death and not to recovery, that although our knowledge of their nature may still call for further investigation, and although in the matter of remedies we, may still be wanting in means, that, nevertheless, the power of medicine over disease is so far effective that we may with confidence encounter the majority; with hope, at least, the minority.

Dr. Bartlett concludes by alluding to the benefits derived from medical science in the departments of obstetrics and surgery, glancing by the way at the unsoundness of the more favourable comparison which is often instituted as regards surgical means. A word or two are also bestowed by the author on "certain medical doctrines," which we need not dwell upon.

We congratulate the author and the profession on the completeness with which he has achieved his defence of the certainty of medicine. We do not think that the advocate has transgressed the strict limits of his "record." We think with the author that "medical art, as it has been embodied in the lives and labours of its professors during two thousand years, has been worthy its high vocation, true to its great trust, faithful to its almost divine mission, and that this is more true of it now than ever it was before." (p. 21). Under these impressions we can the more readily overlook some slight blemishes of style, peculiar perhaps to certain transatlantic districts. We would earnestly commend the attentive perusal of this "Inquiry" to our more sceptical readers, convinced that their faith in medicine

will be thereby fortified, and themselves protected from the unsettling influences of various winds of doctrine.

Portraits of Diseases of the Skin. By ERASMUS WILSON, F.R.S. Fasciculus 6. London: Churchill. 1850.

AFTER an unusually long interval, we have to announce the appearance of another fasciculus of this excellent publication. The first illustration represents *Rupia Syphilitica*. There is a full history of the case, and the representation is given with horrible fidelity. The second plate represents *Eczema Simplex et Rubrum*; the third *Impetigo Syphilitica*, and the fourth *Inflammatio Folliculorum*. It is important to observe that these illustrations are not invented: they have been taken from selected cases which have actually occurred, and the history and progress of each case, with an account of the treatment, precede the illustration. We shall merely remark that this fasciculus sustains the high character which the work has already acquired as an aid to the diagnosis of skin diseases. The plates of eczema and impetigo present all the relief of wax models.

EASTERN DISPENSARY, GOODMAN'S FIELDS.

THE annual meeting of this excellent institution, which was established in the year 1782, took place at the dispensary on Thursday, the 7th inst. The report of the physician, Dr. Munk, stated that during the prevalence of the cholera no less than 760 persons, who were attacked with premonitory symptoms of that fatal disease, were supplied with medicines from the dispensary without their being required to produce any recommendations from a governor, and in no case had the physician been able to discover that the remedies supplied had proved unsuccessful. About 3500 patients received the benefits of the institution during the year, including 230 married women who were delivered at their own habitations and since the charity was established 120,000 persons had been admitted patients. The committee in their report anticipate that ere long a more suitable building than the present will be procured for the business of the institution. The treasurer's report was highly satisfactory, as it showed that the recent festival in aid of the funds had enabled him to purchase a sum of £1000 Three per Cents

Proceedings of Societies.

WESTMINSTER MEDICAL SOCIETY.

March 2, 1859.

On the Types of Delirium Tremens.

Dr. JAMES BIRD read a paper on the types of delirium tremens, in which he proposed to consider the relation of the pure or simple form of this disease to sequent and kindred affections of the brain, of an inflammatory, febrile, and epileptic character. These are now variously arranged in different nosological systems as *delirium tremens nervosum et traumaticum*, *phrenitis potatorum*, *encephalitis tremefaciens*, *delirium afebrile tremens*, and *irritative fever of drunkenness*. In order to obtain a practical foundation for the different modifications of this complaint, whether of a simply nervous or complicated inflammatory character, Dr. Bird considered them under the four divisions into which he has classed the phenomena. He characterised each form by a distinct definition of the modifications, which, in a practical point of view, are to be considered as transitions only from lesser to greater degrees of the same complaint, or the modifications of a like pathological condition, dependent for the peculiar marks of manifestation on the less or greater effect of predisposing causes, and the previous morbid changes effected by them in the constitution, particularly in the excretory functions of the liver and kidneys. Should there be any difference of opinion as to the propriety of the nosological arrangement of modifications of delirium tremens, usually adopted by different authors, into *nervous* and *traumatic*, *idiopathic* and *symptomatic*, and whether such consist in nervous erethism or inflammation; the divisions into *simple*, *inflammatory*, *pyrexial*, and *epileptic*, as adopted in the paper, will enable the physician at once to comprehend how much nervous or vascular derangement may have precedence, and thus guide his judgment in determining how much the particular symptoms may call for the administration of opium or antiphlogistic remedies. Four tabular statements of these several modifications were given, embracing an analysis of 70 cases. Regarding the natural tendency of the first form to terminate in a salutary and spontaneous sleep, at a period seldom less than 60 or more than 72 hours from the commencement of the paroxysm, which may extend, however, to six entire days, Dr. Bird agreed with the observations on this subject by Dr. Ware, of Boston. The generality of cases

composing the first table seldom ran a course beyond the beginning of the fourth day; though in some the nervous erethism, and the increased vascular action of the cerebrum, extended beyond this period. In one instance the symptoms did not subside until the ninth day; but here the exalted nervous sensibility, associated with peripheral irritation, was accompanied, as it appeared, by functional exhaustion of the nerves of the cerebral bloodvessels, followed by relaxation of the capillaries akin to inflammation. The inflammatory form of the disease, which, where the irritation is purely cerebral, is a species of *aesthetic encephalitis*, is characterised by a greater degree of vascular determination to the brain and its connections than in the first; or by a state of inflammation in some of the remote organs, either the stomach or lungs, reacting on the brain. The third form, which is usually met with in the malarious seasons of the year, from July to October, is generally an *aesthetic form* of febrile delirium, such as occurs during fever in those of intemperate habits. The fourth form, or the epileptic, is analogous to the delirium, coma, and convulsions induced by certain narcotic poisons, as belladonna and stramonium; between the symptoms of which poisoning and those of true delirium tremens, a differential diagnosis was given. The diagnosis, also, between the simple erethismal type and the purely cerebral inflammatory one, was pointed out, and the characteristic symptoms of each detailed. The simple forms of the complaint, particularly in second and third attacks, present many of the characters of *acute dementia*, from which they differ but little, Dr. Bird thinks, in pathological condition. Each renewed attack of the former malady seems to bring the symptoms nearer and nearer to those of the latter. In both diseases there is the same lost power of perception and attention, the brain being no longer susceptible of receiving and retaining impressions transmitted to it, and consequently incapable of associating the relations or preserving the recollection of objects presented to it. The morbid appearances of the brain and peripheral organs of the chest and abdomen were then detailed, and the general pathology of delirium tremens given. The *sthenic* or *aesthetic* symptoms which become the objects of treatment have predominance according as the general nutrition of the system has been well or ill performed, or as the nervous centres are in a state of healthy energy or of atrophy with defective innervation. The indications of treatment to be acted on are—1st, to allay the exalted sensibility of the central nervous organs or their peripheries, by reducing vascular de-

rangement and inflammation, by means of mild antiphlogistic remedies, by the removal of all irritating diseased secretions from organs that react on the brain; 2nd, to restore the organs of assimilation to a healthy condition, so as to supply fresh nutrient materials to the blood, and to prevent nervous exhaustion by a moderate allowance of stimuli combined with such materials; 3d, to eliminate poisoned products from the blood, by restoring the proper excretory functions of the liver and kidneys. To fulfil the first indication, tartar emetic solution, in the proportion of half a grain of the tartrate of antimony to two ounces of water, with a drachm of tincture of opium, and an equal quantity of nitrous æther or colchicum, may be used as an effectual means of doing so. This allays the excitement of the brain, and serves to promote healthy action of the skin and kidneys. When the biliary secretion is morbidly increased, emetics are of great use in allaying the irritation of the stomach. When purgatives are necessary, calomel in large doses, or combined with antimonials and opium, followed by castor-oil, were recommended as the best therapeutic agents, as the too free use of strong purgatives is often followed by increase of excitement. Quiet seclusion in a darkened apartment, where the patient can be watched over by a well-instructed nurse; cold douche to the head three or four times daily, and occasionally the local abstraction of blood by leeching or cupping, were the other remedial means recommended. Moderate quantities of thin sago or arrow-root, with wine, brandy, or gin, must be given according to circumstances, in fulfilment of the second indication; and in carrying out the third Dr. Bird highly recommended the free administration of calomel, in combination with diuretics, to restore the impaired function of the liver and kidneys.

ROYAL INSTITUTION.

March 8, 1850.

On the Distribution of Freshwater Animals and Plants.

PROFESSOR E. FORBES, in an extremely interesting and instructive discourse, treated of the facts observed in the present distribution of freshwater animals and plants, with reference—1st, to the causes which have originally brought these about; and 2dly, as to whether *genera* should be regarded as originally distinct and complete arrangements, primarily instituted by the Creator, and extending over the whole world,—or whether the *genera* which we

find separated by great distances on the earth's surface have been originally distinct and separate centres of creation.

Professor Forbes adduced many striking facts in the present and past geological history of the earth, in connection with the geographical distribution of freshwater plants and animals, to prove that the separations or divisions of the originally widespread *genera* have taken place by violent dislocations of the earth's surface.

The lecturer directed attention to the great physical divisions of the North American continent, as influenced by its principal water-courses, and pointed out that each of these has its own peculiar and dominant tribes of animals and plants, grouped in certain regions. An alliance was shown between the plants and animals of the glacial region of North America and the northern European types; also between those of the Nile, the Senegal, and the Niger, as distinct from those of the Mediterranean: between those of the eastern districts of England and those of the European continent; and between those of the opposite coasts of England and Ireland; the western and the American groups; between those of Spain and Syria; and between some species in England and in Egypt.

In reference to the conveyance of species of plants by birds, it was shown that this agency is very trifling, and acting at long intervals; and that, in reference to Europe and America, migration occurs at the very contrary seasons to those in which the germination of plants takes place.

The conclusion established was that the *genera* were originally single and universal, but have been broken up and widely distributed by geological dislocations.

ACADEMY OF MEDICINE, PARIS.

Feb. 23 and 26, 1850.

PRESIDENT, M. BRICHETEAU.

"Engorgements" and Displacements of the Uterus.

M. HUGUIER resumed the discussion on this topic by replying to the argument of M. Velpeau, who, he observed, had admitted the existence of secondary congestions, and, by several other concessions, had abandoned his objections to the positions which he had in the first instance opposed.

M. RECAMIER read a long series of observations, which, he stated, proved the several points that he sought to establish:—1, the existence of abnormal productions within the uterus; 2, the existence of tumefaction of the internal uterine surface;

3, the utility of compression in the treatment of these tumefactions, and of the application of certain external agents in uterine disease.

M. HERVEZ DE CHÉGOIN, co-reporter with M. Dubois on the work of M. Baud, stated that he did not concur in the doubts expressed by M. Dubois in reference to the existence and nature of the displacements and congestions of the uterus which had been under discussion. M. Hervez de Chégoin went at great length into the discussion of M. Dubois' objections.

M. CLOR-BRY informed the Academy that, having resigned the appointment of Chief Officer of Health in Egypt, he had fixed his residence at Marseilles, and that he should be ready to afford any information on medical questions in reference to Egypt that might be required.

M. P. DUBOIS was nominated an additional member of the obstetric section.

On Distension of the Bladder in Infants during Fœtal Life, considered in reference to the cause of dyslocia.

M. DEPAUL, candidate for nomination to the obstetric section, read an essay on the above subject, in which he stated that distension of the bladder by urine presents an obstacle to natural labour. That in these cases the bladder is hypertrophied, as if from repeated efforts at expulsion, during intra-urine life. That the existence of this cause of obstruction may be detected by the hand within the uterus; and that the treatment consists in puncture of the bladder, the hand being guided by the umbilical cord. The subsequent restoration of the natural passage is to be observed as an important point. The essay was referred to MM. the Commissioners Devilliers, Bizard, and P. Dubois.

ACADEMY OF MEDICINE OF
BELGIUM.

Feb. 28, 1850.

Ipecacuanha in Cholera.

M. CARLIER discussed M. Lombard's statements in reference to the employment of ipecacuanha in cholera. M. Carlier inquired wherein this emetic possessed peculiar advantages over other emetics; or, as an evacuant, its superiority over calomel? If it were a specific, M. Carlier justly required that more cures should be effected by its use than by other means. It had been extensively given in Russia. A specific, M. Carlier held, can only act upon the principle laid down by Hahnemann—*similia similibus curantur*; and thus no

remedy cured every case of cholera, but only those in which this physiological principle obtains.

M. FRANÇOIS, in a long address, stated his concurrence in the theories of the homœopaths; but, while he supports their principles, his practice seems at variance therewith.

ACADEMY OF SCIENCES, PARIS.

Feb. 28, 1850.

PRESIDENT, M. DUFREY.

On the Rapidity of the Propagation of Nervous Influence in the Spinal Nerves.

M. HELMOLTZ, Professor of Physiology at Königsberg, transmitted a note on this subject. The author describes the experiments by which he had determined the period occupied in the transmission of an irritation of the sciatic plexus to the gastrocnemius muscle of a frog. This consisted in such an arrangement of a galvanic circle in connection with the muscle, to which a weight was attached, and the sciatic plexus, that the duration of the action of the current, as ascertained by its force, was the measure of the time occupied in the transmission of the influence from the plexus to the muscle. A complicated arrangement of galvanic battery and galvanometers, and mirror and telescope, were employed by M. Helmholtz for this purpose. The following are his results:—

The distance between the points of the nerve irritated was from 50 to 60 millimetres (= 1·96 to 2·36 English inches). This space was traversed by the nervous influence in from 0·0014 to 0·0020 of a second.

M. Helmholtz finds that a low temperature retards the transmission of the nervous influence.

MEDICO-CHIRURGICAL SOCIETY.

At the anniversary meeting of this Society, on the 1st inst., the following gentlemen were appointed office-bearers for the ensuing year:—*President*—Thomas Addison, M.D. *Vice-Presidents*—George Burrows, M.D. F.R.S.; John Thomson, M.D.; Henry Alexander, F.R.S.; Samuel Solly, F.R.S. *Treasurers*—Robert Bentley Todd, M.D. F.R.S.; Benjamin Phillips, F.R.S. *Secretaries*—Seth Thompson, M.D.; Charles Hawkins. *Librarians*—John Hennen, M.D.; James Dixon. *Members of Council*—George Cursham, M.D.; George Gregory, M.D.; William Macintyre, M.D.; Alexander John Sutherland, M.D. F.R.S.; Charles J. B. Williams, M.D. F.R.S.; James Clayton; Thomas B. Curling; William Fergusson, F.R.S.; Henry Charles Johnson; Samuel A. Lane.

Hospital and Infirmary Reports.**KING'S COLLEGE HOSPITAL.**

Feb. 23, 1886.

Division of tendo-achillis—Cancer of lip—Hare-lip—Artificial anus.

Mr. FERGUSON performed several operations to-day. The first was a case of division of the tendo-achillis, which was performed in the ordinary manner.

An elderly woman was then brought into the theatre, with a cancer of the lower lip, which had been coming for some time, and which had latterly increased. It was a case of some interest, from the circumstance of the disease being situated exactly in the median line of the lip. Cancer is almost always confined to the lower lip, and is generally seated on one side or other of the centre of the lip: it is extremely rare to meet with it exactly in the central line. Mr. Fergusson removed it by making a V shaped incision, comprehending the whole of the morbid mass, which was effectually taken away. Two hare-lip pins were then introduced, and the edges closely approximated, and retained by the twisted suture in the same manner as in hare-lip.

The next operation was performed upon a young infant, only six weeks old, having a fissured lip not of a very bad nature. Mr. Fergusson operated upon it in his usual manner, first separating the connection of the lip to the alveolar border to a slight extent, and then paring the edges of the cleft from their bases, and bringing them accurately together by the needles and twisted suture. Mr. Fergusson stated to the students that this was a very young child to operate on for hare-lip: in fact, some surgeons would think much too young for this proceeding. He knew that there was difference of opinion on this subject, some affirming that the operation should not be performed until the child had passed a year or two of its life; but he for his part considered it better to operate as early as possible. He had done the operation on a child only three weeks old.

A patient was now brought into the theatre, exhibiting a most interesting and rare specimen of disease, and exciting much curiosity from various causes. The unfortunate patient was a boy about fourteen years of age, labouring under that most loathsome and distressing of all maladies, a large artificial anus; and the manner in which this had been brought about is curious and instructive.

Some years ago he had an attack of disease of the hip-joint, which led to partial destruction of the joint and copious suppuration: this state of things, however, ended in recovery by ankylosis. But during the progress of the affection, the matter which had been caused by the hip disorder had spread back to the pelvis, and getting about the rectum and sacrum, caused inflammation, and consequent destruction of a portion of the bone; and, as Mr. Fergusson stated, most probably the rectum had been involved and opened by the sloughing process, and a portion of the sacrum having been destroyed, a communication was formed between the integument and intestine, and thus an artificial outlet had resulted. This opening, when the patient was brought under Mr. Fergusson's notice about a year ago, was about three inches in length, and about three quarters of an inch in width: through this the finger could be easily placed into the hole in the rectum, and a bougie passed through the anus would come out at the opening at the back. It had then existed for some years, and the whole of the feces passed through the artificial anus, none whatever coming away by the natural passage. The patient was of course in a miserable and pitiable condition, and his parents had consulted Mr. Fergusson for the purpose of seeing if anything could be done for him. At that time, Mr. Fergusson, after due consideration, determined to make some effort to close this opening, and for this purpose he carefully pared the edges of a portion of it, and brought them together by hare-lip pins: at this time, however, a considerable portion broke away, and union only took place to a small extent. The patient was sent out of the hospital, and admitted again in about three months, when it was found that the opening was still further contracted, and it was determined to make an attempt at closing another portion. This was done in the same manner, and fortunately a most favourable result took place: union to the extent of more than an inch had occurred, and the patient was again sent out of the hospital for a future operation. He was admitted a few days ago, and the vast benefit which this poor lad had gained by the humane and scientific attempts of the surgeon to relieve him, was strikingly evident. About one-half of this terrible chasm had united by firm and healthy adhesion, and that which remained still open was much contracted, and the edges appeared to be in a condition to heal, and it was evident that a speedy union of the whole would take place if it were not for the constant escape of fecal matter: a great, and perhaps the greatest improvement had taken place with regard to this

sign, for as much came away by the natural passage as was discharged by the artificial opening, whereas, as before mentioned, none whatever escaped through the rectum and anus on the previous occasion, nor indeed had the poor boy had a motion *per vias naturales* for upwards of four years.

Mr. Fergusson seeing this improvement, determined to unite another portion of the opening, which he accomplished in the following manner. The boy having been placed under chloroform, and time being allowed in order that he should be perfectly still and prevent any protrusion of the rectum through the opening during the operation, an incision was made on each side of the lower part of the opening, and the soft parts were dissected up on each side; a small cross incision was then made, and the edges were carefully pared, and two hare-lip needles being introduced, this *new facies* wound was accurately brought together, and the operation concluded, a portion of the opening at the upper part, about half an inch in length, being left patent.

After the operation was concluded, Mr. Fergusson made some lengthy remarks upon the progress and history of this case, and in the course of them he took occasion to refer to the ungenerous criticisms which had been made by some anonymous writer in the last number of the *Edinburgh Monthly Journal of Medical Science*, regarding this very case, a report of which had appeared on the last occasion on which he had operated, in a contemporary journal. He read the remarks of the individual who had chosen to criticise in so ungenerous a manner his plan of treatment, and which are to be found under the head of *Surgery*, in the journal. The object of them was to show that he, Mr. Fergusson, had acted quite erroneously, and against "established surgical principles," in attempting to close this artificial opening, and to condemn in strong terms the particular plan of treatment which he had adopted. He should not have thought of referring the students to this criticism, and should have left it to the silence it deserved; but he deemed it his duty, as their teacher, to uphold and defend the doctrines which he had the honour to teach them, whenever the propriety of those doctrines, or the soundness of his practical views, were called into question. They could, however, see that the case under notice had been entirely mistaken by this individual, and he trusted that they could judge for themselves, by contrasting the present condition with that the patient was in some time ago, as to the correctness and beneficial results of the practice he had thought fit to adopt, and to teach them to adopt.

Case of Abscess connected with the intestine, presenting some interesting features.

On Thursday, Feb. 21, Mr. Fergusson called the attention of the students to the case of an old man who had been in the hospital for some time, and who had died the day before, and upon whom they had been fortunate enough to make an examination after death. The circumstances of the case were as follows:—About three months ago the patient was brought into the hospital, labouring under a strangulated inguinal hernia on the left side. It was readily reduced by the taxis; but all the symptoms attendant upon a strangulated hernia did not disappear: the obstruction of the bowels still persisted: it was a doubt, therefore, as to whether the hernial tumor might not have been returned "*en masse*," and the stricture still remain: yet the symptoms were not sufficiently urgent to warrant Mr. Fergusson in cutting down upon the inguinal canal to see if any obstruction still existed. In a few days the bowels became relieved, and the symptoms which caused some uneasiness went off; the patient, however, was kept in the hospital, and after some weeks a swelling appeared in the upper part of the thigh, below Poupart's ligament, and from the sensation given to the touch it was evident it contained some air: there was a gurgling noise to be heard when the tumor was pressed, and the air could be compressed up apparently into the pelvis or abdomen. These circumstances, connected with a swelling appearing in the situation of a hernia soon after it had been strangulated and reduced, rendered it doubtful as to what the nature of it could be. Mr. Fergusson would not give a decided opinion about it; but he stated that his impression was, that it was an abscess connected with some portion of the intestinal tube: still, however, he could not tell whether it was in connection with the abdomen through the crural canal, or by means of the sub-public hole. It was considered by some who had seen the case to be an obturator hernia; but this was improbable, as it was of a larger size than a hernia of this description would be. One sign which led him to believe it was an abscess was the general swelling and oedematous condition of the whole thigh which had taken place subsequent to the appearance of the circumscribed tumor.

As the patient continued getting worse,—for he was now reduced to a very feeble condition, and he was anxious to know what the tumor contained,—Mr. Fergusson made a puncture into it with a grooved needle, and it was discovered that pus came out: he had previously carefully examined

the rectum to see if there was any communication with that portion of the gut. A few days after that he made a freer puncture into the swelling, which was found to be a collection of matter and air; it was situate beneath the adductor muscles. Some feculent matter came away at the time; the patient got temporary relief from this proceeding; a large discharge of pus continued for about two days, when a profuse discharge of feculent matter came away from the wound: there was of course then no doubt that the abscess was connected some how or other with the intestine.

The patient still continued sinking, got very much emaciated, and died about three weeks afterwards. The feculent discharge kept up from the wound for some time, but latterly most of the contents of the intestines came away by the natural passage.

On making a post-mortem examination, a very curious and interesting morbid specimen was discovered; and Mr. Fergusson had the parts before him to show to the students.

In the situation of the swelling in the thigh was a large cavity of an abscess which had extended through the obturator foramen into the pelvis in front; the matter also had insinuated itself through the sacro-sciatic foramen, out of the pelvis to the back of the hip, so that the joint was, as it were, surrounded, and encroached upon by the matter; but yet the articulation itself was perfectly sound, there being no signs of inflammation even within it. The most remarkable circumstance, however, and that which rendered the case so interesting, was this—a portion of the small intestine, which was found to be the jejunum, was discovered to be adherent to the wall of the pelvis near the obturator foramen, and to be connected by a fistulous opening with the cavity of the abscess. Above this was the empty sac of an inguinal hernia, which had directed attention on the patient's admission; and it was evident that the intestine had been properly returned; but that having been inflamed, it had subsequently sloughed and ulcerated, and by the irritation caused in the tissues around, suppuration had been set up, and the abscess formed presenting all the remarkable features that had been noticed during life.

Mr. Fergusson particularly remarked upon one symptom which had latterly occurred, and for which they could now account. It was remarked what an extraordinary and rapid amount of emaciation had taken place: it was evident that the chief cause of this was the circumstance of the jejunum being the portion of gut which was ulcerated, and which, allowing the escape of the contents of the intestine, prevented the absorption of the nutritious

particles, which was chiefly carried on in the intestine below that point.

On Thursday, Feb. 28, Mr. Fergusson performed a second operation on the patient from whom he had removed the foot at the ankle-joint about three weeks since. It appears that a few days after the proceeding, sloughing of the anterior part of the lower flap, which had been made from the integuments covering the heel, commenced, and destroyed so much of the soft parts as not to allow a sufficiency to form a covering for the ends of the bones. The parts soon resumed a healthy appearance, and Mr. Fergusson determined, instead of amputating higher up in the leg, merely to remove a slice of the bones, and thus to leave the remainder of the flap as a covering, and to form to all intents and purposes an ankle-joint stump. The patient was first placed under the influence of chloroform, and the operation was performed by dissecting up the soft parts carefully from their connection with the tibia and fibula, until about one inch of these bones was bared. A section of them was then made by the saw, and it was found that a sufficiency of the original flap remained to cover them.

Mr. Fergusson took the occasion to make some remarks upon the operation of amputation at the ankle-joint, and upon the consequences which sometimes follow it. They had observed that sloughing of the posterior flap had taken place not only in the case which he had just presented to their notice, but it had also occurred in the young man upon whom he had performed the same operation a fortnight ago, and who was lying now in the same ward. In the latter case it fortunately happened that the sloughing process did not proceed very far, consequently there was sufficient covering to form a very good stump: in fact, in this instance the sloughing had been perhaps of some benefit, as the posterior flap was rather larger than was absolutely necessary. In the present case, however, so much of the integument had sloughed that it was impossible that sufficient would be saved to form a flap: he had therefore been under the necessity of taking off a portion of the bones, and now, as they had seen, an ample covering was formed.

Those who were not acquainted with this operation of amputation at the ankle, and its results, might suppose that there had been some fault in the operation in these cases, and especially in the case just brought under notice; and, certainly, the surgeon makes a mistake if, during an amputation, he cuts the flaps too short, so as not to allow a sufficiency to protect the bones well; but here plenty of soft parts had been left. Experience, however, has

shown that sloughing of the flap is extremely likely to happen after this operation; and it is by no means difficult to understand how this takes place, and what causes it, for the flap is formed merely of the thick skin of the heel, through which the circulation goes on slowly, and without difficulty; and, moreover, if the posterior tibial artery be cut, as it sometimes is, before it divides into the terminal branches, there will be less blood sent to the stump, and thus sloughing will be favoured.

On Saturday, March 2d, Mr. Fergusson performed the operation for hare-lip, on a child only four weeks of age: it was only a simple fissure, and the operation was quickly performed, in the usual manner. Mr. Fergusson remarked that the child was very young to operate upon, but he considered it was better for the success of the operation of hare-lip that the subject should be young, and that no danger need be apprehended provided it be done with rapidity, and without loss of more blood than was absolutely necessary.

Mr. Fergusson then operated upon a young woman, who had a cleft palate involving the soft parts only. The operation was performed according to the method first proposed by Mr. Fergusson in 1845; and we shall describe particularly the various steps which are gone through in this delicate and troublesome proceeding. Until the last few years, the operation consisted only in separating the edges of the cleft from the hard palate by some couches of the knife, paring the edges of the fissure, and then bringing them together by means of the suture; but the operation of Mr. Fergusson is a great improvement to the old one, inasmuch as he first divides certain muscles which are connected with the palate, and which if not divided exert a certain amount of traction on the edges of the fissure, and are the cause of union not taking place. The steps of the proceeding were as follows:—In the first instance he made use of a peculiar knife, with a short thin cutting blade, set at right angles to a very long handle; introducing this on each side of, and above the edges of the fissure, he divided the *levator palati* muscle on both sides; by this means the strain was taken off the soft parts: after this was accomplished, he laid hold of the soft palate with a pair of forceps, and by using a narrow thin-bladed knife pared the edges of the fissure by one incision: three sutures were then introduced through the parts, by means of a long curved needle, and the edges accurately brought together without any strain being exerted upon them. The operation in this instance was not very

tedious or troublesome, as the patient was remarkably firm, and materially assisted, by her calmness and fortitude, in rendering more easy the various steps of this operation, which Mr. Fergusson stated he considered to be the most troublesome of all those the surgeon is called upon to perform.

Medical Trials and Inquests.

ROSCOMMON ASSIZES.

Feb. 27, 1850.

CASE OF POISONING BY ACETATE OF LEAD—TRIAL FOR MURDER, AND CONVICTION OF THE ACCUSED.

BRIDGET MANN was placed at the bar, charged with the wilful murder of her male child.

The indictment charged that the prisoner, on the 6th of February, 1850, at Cloonshanville, wilfully and of her malice aforethought, did administer to the said male child a large quantity of a deadly poison called sugar of lead, by means whereof he became mortally sick and died. There was a second count charging the prisoner with committing the offence on the 7th.

The prisoner was undefended, and the Court requested Mr. Burke to undertake her defence.

Bridget Scanlon, examined by Mr. Cloe. —Knows Bridget Mann, the prisoner at the bar: she was living, in the latter end of January last, in French Park. She was confined of a child; I assisted her in her labour; she is not a married woman; the child was born alive; it was a boy; her nephew Denis Mann was there; he was called Denis Higgins; he was called Mara, after his mother; at the time of the birth, when the child began to roar, she told the nephew to put his hand to its mouth and stop the cry of the child; he did not do it; she told me to do it, and I would not; she got down her hand herself and stopped the cry; I took away her hand, and let the child cry; she said I wanted to hang her, and I told her I would hang for it, as well as she, if any thing happened to the child. The child appeared strong and healthy; it was born on Wednesday, and lived until that day week, and died when seven days old. After the child was born it did not get any thing for two days; but then she gave it suck; she milked her breast several times before she gave the child the suck; she said it was not able to take suck; the child was very weak at the time; remembers about Wednesday after the child was born Denis Higgins was at the house; pri-

soner told him to go over to Roger Berne in Frenchpark, and bring her a ha'porth of sugar of lead; he went and brought back a paper with a white powder in it; he gave it to her. The prisoner put it in a saucepan; she shook it into the saucepan; she put a couple of spoonfuls of water into it; she took it out of the saucepan in a spoon, and gave the infant some of it; it was choking the child, but it was so hungry it must have swallowed it; the child began to vomit in a few moments after; and in about half an hour after that it began to purge him: the vomiting and purging continued; the child got rest towards evening, the same as if it had been sleeping; part of what he vomited was like the yolk of an egg; it passed the night easy; the next morning Denis Higgins was sent to Roger Berne's for another ha'porth of sugar of lead; he brought it back; it appeared the same as what he got the day before; she wet it in the same manner as the morning before, and gave it to the child with a spoon; the child was striving to throw up, but was not able to do so; can't say if he purged that day; it was not able from the second dose to stir, and was very weak until it departed that day after Mr. Ferguson gave it a lay baptism; not a bit of nourishment was given to the child that day; I was brought forward to the inquest, and saw the child there of which the prisoner was delivered.

The witness was cross-examined at great length by Mr. Burke, but nothing favourable to the prisoner was elicited. She admitted she was a girl of abandoned habits for the last two months; but from her demeanour it was quite evident she was telling the truth. It appeared the prisoner was in the habit of using sugar of lead diluted as a wash for some disease she contracted.

Denis Higgins was next examined, and corroborated the evidence of the last witness. He proved he bought the sugar of lead on the two occasions referred to by her, and saw the prisoner administer it to the child on two occasions.

Edward Mullerin examined by Mr. Keogh—Is a shopman of Roger Berne's. Sold Higgins sugar of lead about a month before the death of the child.

Daniel N. Wallace, M.D., proved he made a post-mortem examination of the body; that he took out the contents of the stomach and intestines, and put them into two bottles, which were sealed for the purpose of analysis.

Dr. Geoghegan, Fellow and Professor of the Royal College of Surgeons, examined both as to their morbid appearance and to the nature of their contents. The tongue did not present the appearances described

by Dr. Wallace—a circumstance readily explicable through the subsequent effect of maceration and putrefaction. The soft palate, gullet, and mucous membrane of the stomach and small intestines, exhibited distinct evidence of corrosion; and the latter, as well as the large intestines, were inflamed. Sugar of lead is competent to the production of the appearances of inflammation and corrosion observed. Witness detected the presence of an organic compound of lead in the contents and texture of the stomach, from the presence of which the ingestion of acetate of lead is to be inferred. In the case of poisonous metallic salts, the poison undergoes alteration by contact with the organic fluids and textures.

Cross-examined by Mr. Burke.—The quantity found in the contents (although evidently considerable) was not determined; the inquiry, although occasionally necessary to the solution of other questions, being irrelevant as regards the cause of death; in the present case the fatal effects arose conjointly from the absorption of the poison and its local corrosive influence on the alimentary canal. The effects exerted on the economy by the compounds of lead are either chronic or acute: the former may be produced by the repeated administration of small doses of the same preparation, which in a large dose will give rise to acute poisoning; the chronic effects are constipation, colic, paralysis, with various others.

By the Judge.—Emaciation may arise from chronic lead poisoning, but not in a case like the present; sugar of lead is not an active poison, except in large doses.

Baron LEXFORD charged the jury, who found a verdict of guilty.

The prisoner protested the case was got up against her by Bridget Scanlan and Denis Higgins, and that she was innocent.

She was sentenced to be executed.

WESTERN CIRCUIT.

Salisbury, March 9th.

ACTION FOR MALAPRAXIS.

Dowling and Uxor v. Hitchcock and Ives.

MR. DOWLING was a tailor residing at Westbury, in this county, and the defendants were surgeons. In August 1847, Mrs. Dowling was thrown out of a four-wheeled chaise, and was most severely injured, having a concussion of the brain, three ribs broken, the lungs injured, the shoulder much damaged, and the leg fractured. The defendants were called in and set the leg. She remained under their care

for eight weeks, and then she was removed to her own home, and attended by her regular surgeon. She was afterwards seen by Mr. Norman, a surgeon of Bath, but she could not even at the present moment walk upon the leg. The action was brought for negligent and unskilful treatment.

Three country surgeons were called, who gave it as their opinion that the course pursued by Mr. Hitchcock was not correct, and that the treatment had shown a want of skill.

For the defendants, Mr. Norman of Bath, and Mr. Skey of St. Bartholomew's Hospital, were called, and they stated that Mr. Hitchcock had acted in the most judicious manner: that the injuries must have been of the most serious nature, and very difficult to treat, and they did not think anything better could have been done. It was a regular smash. Mr. Skey said that Mr. Hitchcock had been a pupil of his, and had gained a very high reputation at the hospital for surgical skill. The jury retired, and then returned a verdict for the defendants.

The case did not conclude till past 10 o'clock at night.

* * This case adds another to the numerous instances in which medical practitioners are ready to impeach the correctness of each other's practice upon the most trivial grounds. Such conduct reminds us of the Irish metaphor—"If you put one medical man on a spit, you will easily find another to turn him."

Correspondence.

CASE OF INFANTILE PULMONARY DISEASE.

SIR,—Permit me to enclose a case of infantile pulmonary disease, which seems to bear on the paper of J. J. Trayer, M.B., published in your number of the 1st inst.

Believe me,

Very truly yours,
R. H. A. HUNTER,
Staff-Surgeon.

Bristol, March 8th, 1850.

M. J. L., *æt.* 20 months: fair complexion, and delicate from birth. Had fever several times, even from the time she was ten days old, and without any obvious cause; and when ten months, was almost despaired of from influenza. Was weaned at fifteen months, and then steadily but almost imperceptibly declined. At eighteen months (August 1849) had an attack of cholera infantum. Improved again a little, but still very emaciated, and at twenty

months had a more formal attack of dysentery, accompanied with copious mucous discharges, tinged with blood: sank, and died in ten days. Previously to the attack of cholera her dejections were observed occasionally to be very light or clay-coloured, sometimes with slight diarrhoea, and again at the commencement of the last dysentery. The principal remedies employed were the Hyd. c. Cret. and Dover's powders, &c.; chalk mixture, embrocations, mustard poultice.

Autopsy, twelve hours post-mortem.—Great emaciation, but particularly over the chest. Face tolerable, but eyes rather sunk. Lungs—upper lobes healthy; right lower felt hard or stringy, which on being cut evinced partial carnification, or imperfect expansion: from *left* lower seemed to hang a tongue-like appendage, two inches perhaps in length, and about one in breadth at base, tapering to a point, quite flat, *and had evidently never been inflated*, though from its tubes a white frothy fluid could be pressed. No tubercles or enlarged glands in chest. Stomach: there was a small white speck, as from something adhering, but it could not be scraped off. Jejunum empty, and with the rest of small intestines quite healthy. Gall-bladder full of healthy bile, tinging also the neighbouring organs.* Colon, throughout its entire length, thickly and very equally studded with small fleshy elevations, or rather granulations."

Medical Intelligence.

REPLY OF THE COUNCIL OF THE INSTITUTE
TO THE LETTER OF THE COUNCIL OF THE
COLLEGE OF SURGEONS.

(Copy.)

To the Council of the Royal College of
Surgeons of England.

The National Institute of Medicine,
Surgery, and Midwifery,
Hanover Square,
Feb. 16, 1850.

GENTLEMEN,—I am directed by the Council of the National Institute of Medicine, Surgery, and Midwifery, to acknowledge the receipt of a letter bearing date the 5th of February instant, in which the Council of the College desire to express their regret that they cannot adopt the views set forth in the Suggestions submitted to the Council by Mr. Bottomley, the chairman of the Committee of Associated Surgeons of England, at the interview which took place between the president and vice-presidents of the College, and a deputation appointed by

* Mesentery studded with enlarged glands from the size of a pea to that of a small bean.

a meeting of delegates from various medical bodies desirous of promoting medical reform, and at which interview the suggestions alluded to were presented.

A copy of this communication has been laid before the deputation.

The Council of the National Institute deem it unnecessary on the present occasion to make any remark upon the reasons assigned by the Council of the College of Surgeons in support of their determination to reject Mr. Bottomley's "Suggestions." The Council of the National Institute limit their observations in reply to that portion of the letter which bears reference to the "Heads" or "Principles" agreed to by them at the Conferences held at the Royal College of Physicians, conjointly with the medical corporations, and designed to be incorporated as a Bill for the regulation of the medical profession.

The Council of the National Institute again declare that they fully abide by the arrangement as set forth in the "Heads" or "Principles" adopted by the Conference Committee, and that they are willing to assist in obtaining a legislative measure founded upon those principles, provided the other assenting parties adhere to them in all their integrity.

It is, therefore, with feelings of the utmost surprise and astonishment that the Council of the National Institute have perused the eighth paragraph in the letter recently received from the Council of the College of Surgeons, and which paragraph is as follows:—

"8th. The College of Surgeons consented originally to the institution of a new college, as one for the more efficient performance of the duties confided to the Society of Apothecaries."

The Council of the National Institute have no hesitation in affirming that this interpretation of the "Principles" is totally at variance with the tenour of the proceedings at the numerous conferences from which the "Principles" in question emanated, and they particularly direct the attention of the Council of the College of Surgeons to the following remarks:—

1st. The Council of the Institute were invited to nominate two general practitioners, being members of the College of Surgeons, and licentiates of the Society of Apothecaries, to act specially as the representatives of the general practitioners, at the Conference Committee, in accordance with the suggestion of the Right Hon. Sir George Grey, the Secretary of State for the Home Department, which invitation was accepted and responded to by the Council of the Institute, in deputing two of their body, possessing the qualifications, to represent

apothecaries, who were already represented at the Conference, but as general practitioners in medicine, surgery, and midwifery; thus clearly indicating the distinction *ab initio* between the Society of Apothecaries and the general practitioners. Had it been otherwise, and had the Council of the Institute no other interests at stake than those appertaining to their rights under the act of 1815, they might have deputed, with perfect propriety, the representatives of the Society of Apothecaries to act for them, in whose judgment, discretion, and enlightened policy, the Council of the Institute had the most implicit confidence.

2d. The Council of the National Institute, in furtherance of repeated resolutions adopted by large and influential societies and general meetings, have upon every occasion maintained that they considered it essential to a satisfactory settlement of the medical reform question, that the general practitioners should have the unrestricted right to regulate the education and examination of the candidates for admission into their body, in every branch of medical science, subject only, in common with other corporate and educational bodies, to the general supervision of a controlling Council; and, throughout the whole of the discussions which have taken place at the conferences at the Royal College of Physicians on this subject, their representatives, as the Council of the Institute understand, have unequivocally claimed this right on public and professional grounds—a right which, in the opinion of the Council of the Institute, has been rendered still more essentially necessary by the arbitrary establishment of the fellowship in the Royal College of Surgeons. Furthermore, in all their communications with the Government, the Council of the Institute have invariably claimed the right to test the candidates for their diploma in all branches of medical science they might deem necessary, and the justice and expediency of this claim has been invariably admitted.

3d. It has long been known to the profession that the Society of Apothecaries, with great public spirit, and a disinterestedness that deserves the highest commendation, consent to relinquish the powers deputed to them by the Apothecaries' Act of 1815, solely upon the condition that the general practitioners are to possess an efficient control over the education and qualifications of their own class, and especially that they shall, in any future arrangement of the profession, be under no restriction whatever in the examination of their candidates.

4th. The Council of the Institute can have no hesitation in declaring most posi-

tively that the parties to the Conference Committee, holding its meetings at the Royal College of Physicians, have fully and completely recognised this principle. Not only were the proceedings of the Conference Committee originally founded upon it, but the resolution of the 2d of May, 1849, the last formal act of the Conference, was framed and assented to for no other purpose than to ratify this principle, and to satisfy the Council of the Royal College of Surgeons as to its operation as respects the diploma. In corroboration of this statement, the Council of the Institute call the attention of the Council of the Royal College of Surgeons to the following memorandum, read by the representatives of the general practitioners to the Lord Advocate, in the presence of the other parties to the Conference, on the 18th of April, 1849.

Copy of Memorandum.

"The representatives of the general practitioners in the Conference Committee respectfully represent to your lordship that they consider it essential to a satisfactory settlement of the medical reform question, that the general practitioners should have the unrestricted right to regulate the education and examination of the candidates for admission into their body in every branch of medical science, subject only to the general supervision of the controlling Council; and that, throughout the whole of the discussions which have taken place on this subject, they have upon every occasion unequivocally claimed this right on public and professional grounds, and they believe it has been fully considered and conceded by all parties.

"They further respectfully represent to your lordship that they deem it essential to the harmonious working of a new Act of Parliament, and for the prevention of any future misunderstanding, that for obvious reasons this right should be recorded and duly provided for in the charter proposed to be granted to the general practitioners, and also in the Act of Parliament.

"Without such a record including surgery, on any appeal to the supreme Council, they would be unable to sustain this right, and the omission of the word 'surgery' altogether in these documents would place in the hands of any party, who might consider the interests of the general practitioners as opposed to their own interests, a power not only of depressing the education of the general practitioner as respects surgery, but also as respects the other branches of medical science and practice, comprised in the terms medicine, or medicine and midwifery. "JAMES BIRD,

"HENRY ANCELL.

"April 28, 1849."

The resolution of the 2nd of May, above referred to, and agreed to by the Conference Committee unanimously, was as follows:—

Copy of Resolution.

"That the Council of the Royal College of General Practitioners shall have the power to direct the entire course of study to be followed, and to test the competency of the candidates for the diploma of the College by such examinations as it may deem necessary, prior to their admission into the said College.

"But it is clearly understood by all the parties assenting to this resolution that the competency of the persons examined to practise surgery shall not be specified in the diploma, such certificate of competency in surgery being provided for by the subsequent examination at the Royal College of Surgeons."

The Council of the Institute desire, without compromising their opinions as to the propriety of creating an institution that should comprise within its own limits the entire range of medical and surgical knowledge, to remind the Council of the College of Surgeons that they have, in conjunction with the other bodies, admitted the fact adverted to in the letter of the College of Surgeons,—namely, that many of those persons preparing themselves for general practice had for years past voluntarily sought the diploma of the College as the best guarantee of their surgical qualifications; and the Council of the Institute, in adopting the "Principles" agreed to at the Royal College of Physicians, consented to an arrangement by which it is provided that every future general practitioner, without exception, should possess, in addition to his own diploma, the diploma of the Royal College of Surgeons also.

A new arrangement of the medical profession, now rendered absolutely indispensable by the anomalous state of the existing laws, the irregularities of practice, and the discordant opinions prevailing as well amongst the corporations as the individuals of the profession, must be, in the opinion of the Council of the Institute, an arrangement involving mutual concessions, or a re-organization of the profession upon an entirely new basis, irrespective of corporate interests.

The Council of the National Institute have invariably conducted their negotiations with the medical corporations in the spirit of concession, and have employed their best efforts to temper the sanguine expectations of the great body they represent; it is therefore with regret and some serious apprehensions for the future tran-

quillity and well-being of the profession, that they observe that so little of this spirit pervades the Council of the Royal College of Surgeons of England.

The Council of the Institute cannot avoid expressing their surprise at the general tone of the communication they have had the honour to receive from the Council of the Royal College of Surgeons, and more particularly at the assumption therein contained, that the recently created class of fellows are of a higher grade than the great body of medical and surgical practitioners who have not been admitted within the pale of that arbitrary distinction. The Council of the Institute most respectfully remind the Council of the College of Surgeons, that the gentlemen whom the latter have thought proper to regard as belonging to a grade inferior to that of the fellows, possess, in addition to the qualifications in surgery given by their College, certificates of competency also in medicine and midwifery, obtained by a strict examination on those subjects. The Council of the Institute regard the statement of the Council of the College of Surgeons as calculated to mislead the public at large; and they feel themselves compelled to remind the Council, that, in a profession which *de facto*, and even according to one of the highest authorities of their own body (the late Mr. Abernethy), is one and indivisible, the assumption of inferiority of grade on the part of a class of individuals who have been educated in and actually practise all its branches as the general practitioners of medicine, surgery, and midwifery do, and of superiority on the part of those whose education is limited to one branch, and whose practice, if the fellowship be of any value at all, ought to be limited to that of *pure surgery*, is a manifest inconsistency, and can but prove offensive to every right-minded individual in the profession.

To that portion of the letter from the Council of the College in which it is suggested that the future education and examination of the general practitioners should be vested in the Colleges of Physicians and Surgeons, the Council of the Institute entertain the same objections as heretofore, which objections were most explicitly and effectively placed before the late Government, when Sir James Graham's Medical Bills were under discussion.

In conclusion, the Council of the Institute regret that an important and influential body, as the Council of the Royal College of Surgeons undoubtedly is, should have repudiated the "Principles" unanimously agreed to by the Conference Committee; and as, from the tenour of the letter of the Council of the College, the course taken by the Council is likely to in-

terrupt, if not to terminate, the existing negotiations, the Council of the Institute feel it a duty to themselves individually, and to the public at large,—who are most deeply interested in possessing, not merely a limited number of well-educated practitioners in surgery, but a large class of completely educated and thoroughly competent general practitioners of medicine, surgery, and midwifery,—to declare that they are firmly resolved to maintain, both in and out of Parliament, their right to the unrestricted examination of the candidates for general practice; that such examinations comprise all subjects essential to or connected with the due and efficient practice of the profession, and that the efforts of the Institute will never in the smallest degree relax until this act of justice is accomplished, either by a complete change of the constitution of the Royal College of Surgeons, or by the institution of a new Royal College of General Practitioners in Medicine, Surgery, and Midwifery.—I have the honour to be, gentlemen,

Your most obedient servant,

GEORGE ROSS, Secretary.

SUBSCRIPTION FOR THE WIDOW OF THE DISCOVERER OF IODINE.

WE take this opportunity of announcing that Madame Courtois, the aged widow of the discoverer of iodine, has been reduced to penury by the death of her husband. A sum of about sixty pounds (1500 francs) will enable her friends to obtain admission for her into the *Hospice de Ménages*, at Paris; and a subscription has been opened, both in England and France, in order, if possible, to attain this object. Chemistry and medicine are deeply indebted to the discovery of iodine for many important improvements in science and therapeutics, and we trust that the appeal now made for Madame Courtois may be attended with success. Subscriptions are received by Mr. Claudet, 18, King William Street, Strand; and by Knight and Son, Foster Lane, Cheapside.

MORTALITY AMONG THE BRITISH TROOPS ON FOREIGN STATIONS IN 1849, COMPARED WITH THE AVERAGE OF THE PREVIOUS TEN YEARS.

It was officially stated by Mr. F. Maule, in the House of Commons, on Monday last, that there had been a great diminution of mortality among our troops at foreign stations, compared with a decennial average. We subjoin the figures. Of course it must be presumed that the average is derived from the service of a like number of troops per annum, or the results cannot be compared.

The following was the ratio of mortality

per 1000 of the strength among the troops serving on foreign stations for the year ending March 31, 1849, compared with the average of the previous 10 years:—

	Deaths in 1848-9.	Av. of 70 years.
British Guiana	14.2	97.9
Trinidad	33.0	102.9
Tobago	98.6	75.9
Grenada	12.3	43.4
St. Vincent's	6.0	66.1
Barbadoes	128.8	42.9
St. Lucia	17.4	67.6
Dominica	40.4	132.3
Antigua	10.9	68.2
St. Kitt's	19.4	105.6
Windward and Leeward combined	68.4	67.6
Jamaica	48.3	66.9
Gibraltar	8.4	11.1
Malta	3.1	15.1
Ionian Islands	10.3	9.1
Nova Scotia and New Brunswick	19.7	13.0
Canada	15.6	12.6
St. Helena	8.4	15.4
Cape of Good Hope	13.3	12.9
The Mauritius	14.6	24.3
Ceylon	21.5	41.4
Madras	22.4	76.1
Bengal	61.3	75.7
Bombay	26.6	62.5
New South Wales and New Zealand	8.3	14.0
Van Diemen's Land	9.6	14.0

The mortality among the home troops in 1842 had been about the average, excepting the fatal cases of cholera, which, however, had been comparatively few among our soldiers.

ACTION FOR DAMAGE BY EXPLOSION OF GUN-COTTON.—MONEY VALUE OF EYE-SIGHT.

At the Assizes recently held at Swansea, a Mr. Rhys brought an action against Messrs. Hall and Co. for the loss of his sight by an explosion of gun-cotton. The plaintiff was a scientific man, engaged as such in the mining districts, and was invited by defendants to witness some experiments on the use of gun-cotton as a substitute for gunpowder in blasting rocks.

The evidence showed great unskillfulness and negligence on the part of the agent of the defendants. Having failed in introducing a cartridge containing six pounds of gun-cotton (equal to thirty-six pounds of gunpowder) into a hole made in a rock, he cut it open, and forced the cotton in with a stick, alleging that this proceeding would not be dangerous. It was then rammed in by another person with an iron bar, when of course an explosion took place, and all who were near, including the

plaintiff, were most seriously injured. The plaintiff became totally blind. The jury returned a verdict—damages, £1500.

* * The ignorance of the agent of the properties of gun-cotton, as set forth in the evidence at this trial, is almost incredible. We have seen this substance repeatedly exploded by merely stamping on it with the heel on a limestone pavement; and a moderate blow with a hammer on any hard surface will rarely fail to explode it when the fulminating compound is well made.

THE ASYLUM FOR IDIOTS.

WE have the satisfaction to announce that Her Most Gracious Majesty the Queen has been pleased to honour the Asylum for Idiots with her patronage; and to constitute His Royal Highness the Prince of Wales a member of the body of patrons for life, with the privilege of appointing to one bed in perpetuity.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 7th March, 1850:—John Savery Burd, Ideford, Devon—Bernard Conway, Londonderry—Robt. Charles Hurst, Bedford.

OBITUARY.

M. LE DOCTEUR MARJOLIN.

WE have this week to record the death of Dr. Marjolin,—a man whose name has been familiar to the medical profession throughout Europe for the last quarter of a century. He was born at Rey-sur-Saône, in the year 1780, and first made himself known at the Faculty of Medicine in the year 1808. He became Professor of Surgery in the Ecole de Médecine about the year 1816, and acquired great popularity as a teacher, which he retained until his death. It appears that the large classes which he drew as an extra-academical teacher procured for him this chair; and we agree in the opinion of his eloquent panegyrist, M. Dubois, that this is the only genuine and acceptable form of *concourse*. All other varieties of this French mode of choosing professors are nothing more than showy election struggles. It is unnecessary for us to comment on the progress and career of a man whose name is so well known to the profession. Like some other eminent pathologists, he foresaw and predicted the hour of his death. After suffering from a painful illness, he called his son to him the night previously, remarked calmly upon his condition, and

stated to him that he should die before day-break. He died at his residence in Paris, at five o'clock on the morning of the 4th of March, retaining his intellectual faculties until the last moment. His funeral took place on the 6th; and, according to the French custom, eloquent orations were delivered over his grave by several of his colleagues and friends.

MR. JOHN MALYN.

Died, on the 9th instant, at Kentish Town, after a protracted illness, Mr. John Malyn, F.R.C.S., aged 48, many years Surgeon to the Western Dispensary, and Lecturer on Anatomy and Physiology at the Westminster Hospital School of Medicine.

Mr. Malyn was born at Manchester, and commenced his professional education at the Manchester Infirmary, where he became distinguished alike for his talent and assiduity. After the death of Mr. Joshua Brookes, he joined his friend Mr. Thomas King in opening the Blenheim Street School, and subsequently joined that attached to the Westminster Hospital. As a lecturer, Mr. Malyn was eminently popular and successful. He was a contributor of various articles to the *Cyclopaedia of Medicine and Surgery*, and was a singularly upright and estimable man. Faithful himself, he rather unwisely relied on the good faith of others, and having on two occasions been deceived by those on whose good offices he had reason to rely, the disappointment, acting on a too sensitive mind, gave rise to a train of circumstances which ultimately led to his premature death. He has left a widow and numerous friends to deplore his loss.

JOHN ALLAN, ESQ.

On the 7th inst., at Epsom, deeply lamented, John Allan, Esq., surgeon R.N., in the 61st year of his age.

DR. GEORGE PARDOE.

On the 9th inst., at Little Holland House, Kensington, George Pardoe, M.D., aged 40.

THOMAS TAYLOR, ESQ.

On the 7th inst., at his residence, Bethnal Green Road, Mr. Thomas Taylor, surgeon, aged 39.

METHOD OF ARRESTING BLEEDING FROM ALVEOLUS.

DR. HOMANS exhibited to the Boston Medical Society a wax impression of an alveolus, from which a tooth had been extracted. The bleeding was very obstinate, but was completely arrested by plugging the cavity with wax, softened in spirits of turpentine. — *American Journal of Medical Sciences*, Jan. 1850.

Selections from Journals.

DEATH FROM CHLOROFORM.

WE present an abstract of the particulars of the case which we have already* stated occurred in Berlin not long since.

The patient was a young lady, twenty years of age, of good health, well made, and of a good constitution. W., a dentist, having made three unsuccessful attempts at the extraction of a tooth under the influence of chloroform, at nine o'clock in the morning, the patient desired his attendance at her own residence about noon, in order that the extraction might be performed. Two friends were present. For the administration of the chloroform the dentist employed a piece of sponge, of a triangular shape, about three-quarters of an inch in length, and about the same in thickness. He states that he poured thereon from twelve to sixteen drops of chloroform, covered it with a napkin, and then held it under the patient's nose. In a few moments she became motionless. The dentist could not, however, now extract the tooth because her jaws were firmly closed. While he was attempting to open her mouth she awoke; he then sprinkled some water in her face. Both the dentist and one of her friends endeavoured to persuade her to submit to the operation without the use of chloroform. But she experienced so much pain in the trial that she was still determined to have recourse to the use of chloroform. The dentist deposed that he again poured from twelve to sixteen drops of chloroform on the sponge, and applied it under her nose, keeping her mouth open with a piece of wood. She was yet only partially unconscious, and exclaimed "I feel, I feel!" The dentist added four or five drops more. After two or three inspirations one of the friends deposed that she heard "rattling" in her throat, that her countenance became livid: the dentist, who was about to endeavour to remove the tooth, perceiving this change, immediately sent for medical aid.

The other friend, who witnessed the whole proceeding, gave a similar account, adding, that the dentist had desired the deceased to inspire the chloroform through the nostrils, and to expire it by the mouth. Scarcely had she done so, when she closed her eyes, and became senseless and motionless. The same witness deposed that immediately after the second application of the chloroform to the nostrils, the deceased suddenly

* See notice at page 22 of present volume. The period at which death took place is there incorrectly given.

stretched herself out, and that a yellow fluid flowed from her mouth, followed by a whitish froth in considerable quantity. The nose, forehead, and cheeks became of a blue colour. Dr. Kops, a regimental surgeon, who saw her immediately, found her quite dead. On entering the room he perceived so strong a smell of chloroform that his head was unpleasantly affected thereby. He found the chloroform bottle open on the table. The dentist stated that he could not account for this circumstance, as he was always careful to stop the bottle after using it. This, moreover, he urged could not have contributed to the fatal result, because the patient had become suddenly comatose, immediately after the third application. The patient had died in an instant after the first convulsive twitch of the face.

The post-mortem examination was made fifty hours after death. There were no external lesions which could be attributed to the action of chloroform, but abundant evidence of incipient putrefaction. The membranes of the brain were slightly congested, and the larger veins contained some air. The substance of the brain was in its natural condition. The ventricles were empty. The base of the brain, the pons, and medulla, were healthy. The sinuses were not unusually full of blood.

The lungs presented nothing morbid; the bronchi contained a little bloody froth. The blood was of the colour and consistence of cherry-juice. The heart was soft, flabby, and collapsed. Its coronary vessels and cavities were empty, and presented the bluish-red discoloration of decomposition.

In the abdomen, the liver was of its usual colour and consistence, but exsanguine. The gall-bladder quite empty. The spleen rather large, and distended with the above-described kind of blood. The other viscera were also normal.

Dr. Casper observes that the results of the autopsy confirm the opinion derived from cases which have occurred in France, England, and elsewhere, that death is caused by a directly poisonous influence exerted on the heart.

Dr. Casper attributes death in the present case immediately to the administration of chloroform, but acquits the dentist of any imputation of carelessness in its exhibition.—*Casper's Wochenschrift*, Jan. 12, 1860.

X

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Mar. 9.

BIRTHS.		DEATHS.	
Males....	733	Males....	433
Females..	743	Females..	442
	1476		875

CAUSES OF DEATH.

ALL CAUSES	875
SPECIFIED CAUSES	873
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	133
<i>Sporadic Diseases, viz.—</i>	
2. Dropsy, Cancer, &c.	60
3. Brain, Spinal Marrow, Nerves, and Senses	141
4. Heart and Bloodvessels.....	33
5. Lungs and organs of Respiration	171
6. Stomach, Liver, &c.	60
7. Diseases of the Kidneys, &c.	15
8. Childbirth, Diseases of Uterus, &c.	12
9. Rheumatism, Diseases of Bones, Joints, &c.	10
10. Skin.....	4
11. Old Age.....	42
12. Sudden Deaths.....	9
13. Violence, Privation, Cold, &c....	21

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	6	Convulsions.....	37
Measles.....	17	Bronchitis.....	65
Scarlatina.....	14	Pneumonia.....	74
Whooping-cough.....	35	Phthisis.....	107
Diarrhoea.....	9	Lungs.....	9
Cholera.....	0	Teething.....	6
Typhus.....	29	Stomach.....	4
Dropsy.....	12	Liver.....	8
Hydrocephalus.....	31	Childbirth.....	7
Apoplexy.....	34	Uterus.....	4
Paralysis.....	38		

REMARKS.—The total number of deaths was 129 below the average weekly mortality of the tenth week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer	30.17
Thermometer	42.4
Self-registering do.	Max. 60 Min. 44.8
* From 12 observations daily. * Sun.	

RAIN, in inches, '04.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 1.5° below the mean of the month.

NOTICES TO CORRESPONDENTS.

Mr. F. Ellerton.—We regret that it is not in our power to give the information required.

We are much obliged to Dr. Bryson for forwarding to us the valuable Statistical Reports on the Health of the Navy.

We have to thank the Secretary to the Court of Directors of the East India Company for his kindness in transmitting to us a copy of Mr. Balfour's Statistics of Cholera at Madras.

We regret that the letter of the Manchester Medical Reform Committee, and the Report of the Convention of the Poor Law Medical Officers, reached us too late for the present number. They shall be inserted next week.

The Report of the Liverpool Society is unavoidably postponed.

Mr. E. Boulton's paper will be inserted.

Notice.—In order to prevent delay in the insertion, it is particularly requested that all letters enclosing Advertisements be marked on the outside "Advertisement."

Lectures.

LECTURES
ON

LACTATION, AND THE DISORDERS
INCIDENT TO THE PUERPERAL
STATE.

By E. W. MURPHY, M.D.

Professor of Midwifery, &c. in University
College, London.

LECTURE XVI.

PUERPERAL FEVER.

History of puerperal fever.—*State of knowledge previous to 1746*—First called "puerperal fever" by Strother (1716)—*Account of the epidemic given by Malouin in 1746*—*Doulcet's practice, 1750*—*Tenon's account of the disease in Hôtel Dieu, from 1774 to 1816*—*Its great mortality*—*Dr. Routh's account of the mortality in the Vienna Hospital*—*The first reported epidemic in London, 1760*—*White's evidence of its fatality*—*Denman's essay, 1768*—*Leake's and Hulme's treatises, 1770-72*—*Professor Young's account of the fever in the Edinburgh Infirmary, 1773*—*Dr. Joseph Clarke's history of epidemics in the Dublin Lying-in Hospital, from 1767 to 1768*—*Dr. John Clarke's essay on the low child-bed fever of 1788*—*Dr. Gordon's Treatise, 1792, Aberdeen*—*Mr. Hey's account of the fever in Leeds in 1809-12*—*Dr. Armstrong's "facts and observations," giving an account of the disease in Sunderland, 1813*—*Dr. Mackintosh's treatise, 1822*—*Dr. Gooch's essays on peritoneal fevers, 1831.*

GENTLEMEN,—*Puerperal fever* is the next subject of our attention, and one surrounded by difficulties of no ordinary character. Whether we consider on the one hand the opposite opinions that have been entertained respecting it, and the contradictory experience of very distinguished practitioners, or on the other the frequency of its occurrence and its frightful fatality, we must look upon puerperal fever as the most important and at the same time the most difficult question that we have to discuss.

In order to make an approach towards the truth, and to elucidate in some degree its nature, it is necessary to determine what we mean by the term "puerperal fever." We must give some history of the disease it represents, describe as nearly as we can the general character of its symptoms and the morbid appearances that are observed, and then endeavour to deduce

from the facts thus brought before us the nature of the disease. We may also be enabled to appreciate the value of the different doctrines maintained respecting it, and to determine more accurately the best means of arresting its course and preventing its diffusion.

Puerperal fever, in the sense that we understand it, is a disease not constantly met with, but of casual occurrence. It often appears quite unexpectedly, and disappears just as suddenly. Its duration in any single case varies from two to five days, but is sometimes more protracted. It generally pursues a very destructive course, and is attended by a mortality that always excites the utmost alarm: the peritoneum is the tissue chiefly attacked. The causes that produce it, the manner of its progress, and its effects on the animal tissue, are all in obedience to the same laws that govern diseases that result from the absorption of morbid poisons,—as typhus fever, erysipelas, cholera Asiatica, plague.

The history of puerperal fever properly commences a little more than a hundred years ago. Previous to 1746 this disease was never distinctly described. Plater (1602) confounds it with inflammation of the uterus, and under the name of "child-bed fever" several authors included every form of inflammation and fever to which the parturient woman is liable. Strother (1716) was the first who adopted the name "puerperal fever," in place of child-bed fever; but it is quite uncertain whether it was meant to express what we now understand by this disease, or whether it was equally comprehensive as the former term, "child-bed fever." The first accurate account of puerperal fever was given in 1746 by M. Malouin, who described very faithfully a frightful epidemic that then appeared in Paris, especially at Hôtel Dieu, which was so fatal that scarcely one woman recovered. Previous to this period, in 1644, a similar epidemic seems to have reigned in the same hospital. Feu* alludes to it, but so obscurely, that all we can learn is, that the women were attacked with hæmorrhages, died, and on opening their bodies "they were found full of abscesses." M. Malouin thus describes the epidemic of 1746:—"The disease usually commenced with a diarrhoea, the uterus became dry, hard, and painful; it was swollen, and the lochia had not their ordinary course; then the women experienced pain in the bowels, particularly in the situation of the broad ligaments: the abdomen was tense, and to all these symptoms were joined pain of the head, and sometimes cough. On the third

* Feu, *Pratique des Accouchemens*, p. 283.

and fourth day after delivery the mammae became flaccid. On opening the bodies, curdled milk was found on the surface of the intestines; a milky serous fluid in the hypogastrum; a similar fluid was found in the thorax of certain women, and when the lungs were divided they discharged a milky or putrid lymph. The stomach, the intestines, and the uterus, when carefully examined, appeared to have been inflamed. According to the reports of the physicians there escaped clots on opening the vessels of this organ.* In 1750 the fever reappeared in Paris and Lyons with equal severity. At that time an account of it was published by Douloet, who treated it by emetics, recovered several patients, and, like many others, believed that he had discovered a specific. Its returns to Paris became more frequent, and at length it seems to have taken up its permanent residence at Hôtel Dieu. "This terrible disease," says M. Tenon, "has shown itself at different epochs, and its returns have been more frequent than ever: it reappeared every winter from 1774. It commenced usually about the middle of November, and continued till the end of January. It is met with also at the other seasons of the year, even during spring, for it has come to prevail more and more, and to be, *as it were, naturalized.*"† Tenon gives an account of the disease as it appeared in 1774, and from that period to 1816. Seven out of every twelve women who were delivered, were seized with the disease. Two distinct forms of it were successively observed, one a simple form, which was cured by ipecacuan (the practice of Douloet), the other a complicated form for which there was no remedy." "In the complicated puerperal fever the pyrexia is more intense, with exacerbations; the tongue is black and dry; the belly is tense, distended, and tympanitic, and slightly painful. In some women the lochia have been either wholly suppressed or only diminished, others have experienced attacks of ophthalmia; in some, respiration was difficult; in general, the blood showed the buffy coat." The following were the morbid appearances:—"On opening the abdomen, the stomach, the intestines, particularly the small intestines, were inflamed, adhering to one another, distended with air and a yellow fluid matter. The uterus was contracted to its ordinary dimensions, and was seldom inflamed. I have had occasion to dissect two; in one the uterus contained a coagulum of blood. An infiltration of a milky appearance or whey-like fluid existed in certain women in the cellular membrane

surrounding the kidneys. Sometimes also a thick white cheesy matter was met with. When the lungs were gorged with blood, or inflamed, or emphysematous, an effusion of serum was found in each side of the chest. We did not observe the hemorrhages which occurred in the epidemic of 1664, and the uterus was not found dry, hard, and tumefied, as in that of 1746. In the epidemic of 1774 the lochia flowed, but they did not flow in 1746."* Such was the progress of this disease in Paris: at first returning after long intervals, then more frequently, and ultimately becoming an annual affliction. Its appalling fatality may be estimated by the fact that while the average mortality in child-birth in London is about 1 in 150, and in lying-in hospitals varies from 1 in 70 to 1 in 100, the mortality at Hôtel Dieu and the Maternité, is 1 in 20, and sometimes so great as 1 in 13, chiefly caused by puerperal fever. We have reason to think that even at the present time there is very little improvement in this respect. Time would not permit us to enter upon the details of its progress in other parts of the continent; but we have sufficient evidence that it is perfectly similar in its general characters, and has been equally fatal. Dr. Routh, in a very valuable paper on puerperal fever,‡ as it appeared in the Vienna Hospital, mentions that the mortality was as high as 1 in 10, and even 1 in 6 cases. In one division of the hospital the average number of deliveries was from 250 to 300 cases monthly, and the deaths varied from 30 to 70: from one in ten to one in four cases, nearly!

The first distinct epidemic in London seemed to have been equally fatal. It appeared in 1760, but in consequence of the absence of any accurate records it is impossible to say what the exact mortality was: every effort was made to conceal the truth. "A gentleman," says Mr. White, "on whose veracity I can depend, informs me that he attended a small private lying-in hospital in London, in the latter end of May, June, and the beginning of July, 1761, during which time the puerperal fever was very fatal there. That to the best of his recollection, they lost about twenty patients in the month of June. That during this month he himself delivered six women in a short time in the hospital of natural births, and they all died. He was so shocked with the loss, that he desired the gentleman who had the care of the hospital to deliver some of those who should next be in labour, which he did, but they met with no better fate. *They buried two women in one coffin to conceal their loss.*"‡

* Mémoires de l'Académie des Sciences, 1746.
† Important Diseases of Females, p. 6.

* See p. 8.
† Medico-Chir. Transactions, vol. xxxii. p. 28.
‡ White's Treatise, p. 165.

It returned again in 1768. When Denman's essay appeared, he found that depletion on the appearance of the very first symptom of the disease, and afterwards tartar emetic given to produce vomiting, had a beneficial effect; he considered it, therefore, as of an inflammatory character, but admitted that in many instances it soon changed its type, which rendered bleeding dangerous if adopted at a later stage. "For when the fever has remained for a very few days, the putrid symptoms, which are usually according to the degree of the preceding inflammation, advance very rapidly, and its continuance depends upon causes which bleeding cannot remove, and will certainly increase."^{*} In 1770 the fever appeared in the Westminster (now the General) Lying-in Hospital, which had been erected in 1765. "Out of sixty-three women delivered, nineteen had the disease, and thirteen died."[†] Dr. Leake was the attending physician, described the fever in his diseases of women, gave statistical proof of its great mortality, and considered that its cause was inflammation and gangrene of the omentum. His contemporary, Dr. Hulme, then presided over the City of London Hospital, and I believe was the originator of this view of puerperal fever. He complains that Dr. Leake had appropriated his discovery. He published, in 1773, a very excellent essay, in which he gives the most accurate account of the disease, and the post-mortem appearances then observed. He generally found the omentum inflamed, and frequently black and gangrenous: hence he considered inflammation of the intestines and omentum the cause of the disease. His treatment was guided in a great degree by these views: he recommends depletion in the first instance, when the pulse is firm under the finger, but objects to large bleedings.[‡] "An error on either side may be hurtful, for if bleeding be neglected when necessary, it may increase the great tendency which we find to inflammation, not only in the omentum, but in the lungs and other viscera; but if too much blood be taken away it may weaken the patient so much as to prevent her supporting the other evacuations. He believed that Nature endeavoured to throw off the disease by a diarrhoea and a sweat, both of which he encouraged, but when these means failed in their object he was equally cautious not to go too far. He was aware that he had to deal with a disease not exactly analogous to ordinary inflammation; that some change in the blood took place that totally altered its character: he therefore observes—"But the most capital

point of all yet remains: I mean to cut off the purulent fomes, the chief cause of the disease (as the dissections seem to indicate), and to restore the tainted omentum and intestines to somewhat of their perfect state."^{*} For this purpose he recommends Peruvian bark, opium, and aromatics. Dr. Hulme does not state the precise mortality in the City of London Hospital, but it is evident from his account that it must have been great. We have, however, from Dr. Joseph Clarke some information respecting the mortality of the other hospital, at the same period, 1770-71. In the Westminster Hospital, between November 1769 and May 1770, the deaths we have mentioned took place, being nearly one in four cases. "In the British Lying-in Hospital, of eight hundred and ninety delivered in the course of this year, thirty-five died, or one in fourteen and a half.

In 1773 the fever showed itself in the 'lying-in ward of the Royal Infirmary, Edinburgh, of which Professor Young gives the following melancholy account:—"It began about the end of February, when almost every woman, as soon as she was delivered, or perhaps about twenty-four hours after, was seized with it, and all of them died, though every method was used to cure the disorder." The Dublin Lying-in Hospital was founded in 1767, and in ten years afterwards this fever showed itself. It returned again after an interval of seven years (1774), was then absent for 13 years, when it reappeared in 1787: eleven women were seized with the fever, and seven died. "In November 1788, the same fever appeared for the fourth time since the institution of the hospital; . . . seventeen were attacked by this fever, and fourteen died."[†] Since then it has returned to that institution at intervals varying from one to seven years. Dr. Collins gives the dates of several of these endemic attacks, thus—1774, 1787, 1788, 1803, 1810, 1811, 1812, 1813, 1818, 1819, 1820, 1823, 1826, 1828, 1829.[‡] But to return to London. Dr. John Clark states—"In the year 1787 and 1788, the same year in which the disease seems to have been prevalent in Dublin, it was also exceedingly general throughout the whole of this country, but more especially in London, and in hospitals, and made wonderful havoc among the lying-in patients, which gave occasion to great alarm in the minds of women and of persons engaged in that department of medicine."^{||} Dr. Clarke found it to be quite a different disease to any that he had been accustomed

* Denman's Introduction, p. 441.

† Mackintosh's Essay, p. 4.

‡ Hulme's Treatise, p. 77.

* Op. cit. p. 86.

† Medical Commentaries, 1790.

‡ Medical Commentaries.

|| Collins' Treatise, 283.

|| Clarke's Practical Essays, p. 116.

to meet. "In many of its symptoms, and through its whole course, it seems to differ materially from any disease which has been described by authors as attacking women in a parturient state; and notwithstanding that in some respects it is analogous to the diseases described in the former sections of this essay, yet still there is so material a difference in the nature of its attack, in its general progress, and in the manner of its termination, that I think an essential difference will be found to exist between them."* Further than this, Dr. Clarke has made a very important observation with regard to those first attacked with the disease, which from my own experience I can fully confirm. "The first case I met with was in the month of July of the year 1787, in which I was astonished to observe the rapidity with which it ran its course, and the very extraordinary manner in which the woman was destroyed by it."† We have no accurate account of this disease in London from the time that Dr. Clarke's essays were published (1793) until the appearance of Dr. Good's valuable paper on peritoneal fever, who commenced his observations in 1812; but in other quarters, Aberdeen, Leeds, and Sunderland, this visitation elicited writing of considerable ability, and also no small degree of controversy. This malady visited Aberdeen in 1789, and continued more or less till 1792, when it finally ceased. Dr. Gordon published an excellent essay in 1796. He describes the fever as following a different course from what had previously been observed. "The puerperal fever, according to the account given of it by authors, is more frequent and fatal in large towns, and in hospitals, than in country and private practice. But that under consideration was not confined to the town of Aberdeen, but extended to the suburbs and contiguous country, where it proved as fatal as in the heart of the city. It was not peculiar to any particular constitution or temperament, but promiscuously seized upon women of all constitutions and temperaments: for the strong and the weak, the robust and the delicate, the old and the young, the married and the single, those who had easy and those who had difficult labours, were all indiscriminately affected."‡

Dr. Gordon also observes, that "It prevailed principally among the lower classes of women. . . . But women in the higher walks of life were not exempt when they happened to be delivered by a midwife or physician who had previously attended any patients labouring under the disease." And as a confirmation of this mode of commu-

nicating the disease, he states, "That I could venture to foretell what women would be affected with the disease upon hearing by what midwife they were attended during their lying-in, and almost in every instance my prediction was verified."* He quotes several examples to prove that the cause of its being in the country as in the city indifferently, and affecting all constitutions alike, was the fact that the disease was directly communicated from patient to patient by the attending practitioner or midwife. Dr. Gordon considered it to be inflammatory rather than putrid, and that the type of the inflammation was erysipelas.

The treatment that Dr. Gordon found to be most successful was a bold depletion, not adopting, like Dr. Hulm, a middle course, but taking twenty or twenty-four ounces at once, and then, if necessary, ten more. He laid great stress, like Dr. Denman, on the importance of early depletion, and followed it by the free use of purgatives. In this consisted the chief points of his treatment. "When I took away only ten or twelve ounces of blood from my patient she always died, but when I had courage to take away twenty or twenty-four ounces at one bleeding in the beginning of the disease (*i. e.* within six or eight hours after the attack), the patient never failed to recover. After bleeding, it was my practice to give some active purgative, on purpose to bring on a diarrhoea, which, when excited, I found necessary to continue through the whole course of the disease, till it was entirely conquered."† Between the years 1809 and 1812 puerperal fever visited Leeds and its vicinity, with very great severity. Mr. Hey, jun., son to the eminent surgeon, gave an interesting account of it. He says—"For some time after the commencement of this dreadful malady it proved fatal in every case that came within my knowledge, and though a few patients afterwards recovered under the treatment which my father and I had formerly found successful in the puerperal fever, yet the success was very small till the method hereafter described was fully adopted."‡ Mr. Hey perceived the difference between this new disease and ordinary inflammation of the uterus and peritoneum. "He was alarmed by the extreme rapidity with which the disease ran through its course, and by its almost constant fatality, unlike any thing which had ever been known in Leeds." He thought that it approached the nearest to Dr. John Clarke's "low fever of child-bed," and to that described by others as the puerperal fever which has a strong tendency to the typhoid type.

* Op. cit. p. 112.

† Op. cit. p. 119.

‡ Gordon's Treatise, p. 2.

* Op. cit. p. 3.

† Gordon, pp. 77, 78, 80, 88.

‡ Hey's Treatise on Puerperal Fever, p. 2.

"For although it differed from them in some respects, yet it resembled them in its general character, and differed far more widely from simple inflammation of the uterus and peritoneum."^{*} The essential difference in his mind consisted in the greater severity of the disease, and its distinguishing feature was its epidemic character. There was no important difference in the symptoms from those detailed by Hulme, Clarke, and Gordon. Its duration varied from forty-eight hours to several days, although in some instances its progress was much more rapid. In one case the fever went through its course in eighteen hours. Mr. Hey's treatment at first consisted chiefly in active purgatives, by which a diarrhoea was established. The first fourteen cases he details were treated in this way, but he only saved three of them.

Dr. Gordon's practice of copious depletion was then tried, even with more boldness than its originator. "When I was called at an early period I seldom took away less than twenty-four ounces of blood at first, unless some peculiar delicacy of constitution, or an excess of the previous evacuations, forbid it; and, if the delay was protracted to eight or ten hours, or the symptoms were unusually severe, a large quantity, to the extent of thirty, forty, and in one instance more than fifty ounces, in proportion to the urgency of the symptoms and the loss of time. . . . If the pain and severity of the abdomen are not removed, or even materially alleviated, in six hours, the bleeding ought to be repeated; nor should a considerable degree of faintness, nor even a deliquium, make us suppose that further bleeding is either unsafe or unnecessary." This was certainly heroic practice, which we dwell upon more especially in this history, as we shall have again to refer to it on a future occasion: it was as successful as it was bold. Mr. Hey observes—"I have now to add, that after the ninth case (the fifteenth in my practice), in consequence of which I determined to use bleeding in addition to purging, of thirty-three patients whom we attended only three died; the last twenty-six recovered in uninterrupted succession."[†] Mr. Hey's work appeared in 1815, and was followed in 1819 by Dr. Armstrong's "Facts and Observations," in which he gives an account of the puerperal fever which prevailed epidemically in the counties of Durham and Northumberland in the year 1813, and, among other places, at Sunderland, where he resided. This complaint generally occurred about twenty-four or thirty hours, and seldom later than four days

after delivery. It did not seem to depend upon difficulty of labour; "for, in most women in whom it occurred, parturition was remarkably easy, and the placenta was separated after a proper interval, and without more than usual pain." The complaint, when not arrested, generally ran its course in a few days. "Soon after death the bodies became rather livid, and very offensive to the smell, and the abdomen immensely distended." No post-mortem inspections were permitted; consequently, Dr. Armstrong had no opportunity of knowing what morbid changes took place. It appeared that, from all that Dr. Armstrong could collect, this disease existed for more than two years in the counties of Durham and Northumberland. In the year 1811 it arose in Stockton-upon-Tees; but "at Sunderland the first case of puerperal fever happened in January, 1813, apparently under a sporadic form, and the few cases which appeared throughout the winter assumed the same character, the majority being so mild as to yield to brisk purgatives and a spare regimen." In the spring of the year, however, the disease became much more formidable in its character, and about this period five patients fell victims to it in rapid succession. In all, forty-three cases occurred from the 1st of January to the 1st of October, when it ceased. Of this number forty were witnessed by Mr. Gregson, and his assistant Mr. Gregory, the remainder having been separately seen by three accoucheurs;^{*} thus proving the same fact previously observed by Dr. Gordon, that this scourge selected particular accoucheurs as their attendant, and followed their practice with fatal strides. He remarks also, as a diagnostic symptom of this fever, the peculiarly offensive character of the evacuations. "I have generally found them dark, slimy, fetid, and unexpectedly large. Indeed, excepting that they are commonly mixed with hard pieces of scybala, they have neither the ordinary smell, consistence, nor colour, of natural fecal stools, but seem composed, for the most part, of some excrementitious matter, somewhat like dirty yellow paint, thrown out in considerable quantity in the course of this disease."[†] Dr. Armstrong confirms the observations of Clarke, Gordon, and Hey, as to the rapidly fatal course of puerperal fever: "it is certain, from indubitable facts, that it sometimes destroys as rapidly as the plague itself." He found that a diarrhoea coming on in the first stage sometimes carries off the disease; whereas, on the contrary, constiveness is always an unfavourable circumstance, in-

^{*} Op. cit. p. 70.

[†] Op. cit. p. 166, 168.

^{*} Armstrong, p. 21.

[†] Ibid. p. 27.

creasing, in no inconsiderable degree, the difficulty of cure: on the contrary, a diarrhoea in the last stage was a most formidable symptom. Dr. Armstrong considered puerperal fever and puerperal peritonitis as being the same disease, only that the former was generally much more intense, so as completely to prostrate the powers of the constitution. "I have no objection to grant that the inflammatory character of this disease sometimes conceals, and even appears to lose itself in an almost unequalled prostration of the powers of the system. What I wish, however, particularly to insist upon, is this, that the low child-bed fever and the puerperal peritonitis are so far the same as to require the depletory practice: only in the former this practice must be more promptly and powerfully applied, as the time in which the professional man can be useful is much shorter, on account of its greater intensity."* He cautions the practitioner against being deceived by the apparent debility of the patient. "In the epidemic which occurred in the north of England there was an appearance of excessive debility in many cases soon after the attack, *but in all it was purely an appearance of debility in the beginning*—in a word, oppression dependent upon the general excitement and topical inflammation. In the last stage, however, the debility was altogether of a different description, being then connected with general exhaustion and general irritation—the mere consequences of the unrestrained excitement and inflammation which had previously taken place."† The treatment adopted by Dr. Armstrong was in principle the same as that of Dr. Gordon and Mr. Hey. His account of the first case in which it was tried is sufficient to explain it:—"Twenty-four ounces of blood were immediately drawn from a large orifice, so as to induce fainting; one scruple of calomel, suspended in mucilage, given immediately afterwards, and two ounces of strong infusion of senna, containing two drachms of the sulphate of magnesia, ordered to be taken every hour, till copious evacuations should be produced. The attendants were directed to allow the patient barley-water, agreeably acidulated with lemon-juice, for a common drink and diet, and to withhold the smallest portion of solid food or stimulating liquids. In about four hours the medicines began to operate, and several copious, dark, fetid stools were discharged. From that time considerable relief was obtained; and a regular perseverance in purgations, with mucilaginous drinks, and a small quantity of exceedingly

weak chicken broth, completed the cure in five days."* Of the forty-three cases of the disease already alluded to, in which this treatment was adopted, only five died. It is worthy of remark, for a reason which we shall presently explain, that Dr. Armstrong quotes Dr. Gooch as an authority in favour of this practice. "From all he (Dr. Gooch) had seen of the disease, he has been led to the conclusion that the only effectual remedies are bleeding and purging, very boldly and very early employed; but he considers that these measures used moderately at this period do little or no good, while used late they do harm, especially bleeding."† As an exception to this treatment, and to ordinary puerperal fever, Dr. Armstrong describes what he calls "a peculiar congestive disease," ushered in either by sensations of chilliness, or by paleness and oppression without such sensations; but in both cases the vital powers are so prostrate that no regular reaction takes place, as in common fevers; so that the surface remains cool throughout, or there are merely short, partial, and irregular flushes of heat. The shock in some instances is so great that the secretions are all suddenly suspended, and the patient sinks with rapidity."‡ These symptoms were evidently new to Dr. Armstrong: he took the opportunity that was afforded him of investigating the post-mortem appearances, and found them equally exceptional as the symptoms. "In such cases dissection does not reveal, so far as my examinations have extended, any of the usual remains of inflammation,—that is to say, there are no adhesions, no effusions of coagulable lymph, no formation of pus, no internal gangrene from arterial fulness, and the only morbid appearances have been an unusual accumulation of blood in some part of the venous system, without any of those vermilion tints of the capillary arteries which denote the previous existence of inflammation."§ It was just such a case as this that first directed Mr. Mackintosh's attention to the subject of puerperal fever. He wrote a very elaborate essay on the subject, and even exceeded Dr. Armstrong in his advocacy of the same principles of treatment,—that is, bold depletion and purgatives. He insisted that puerperal fever and peritonitis were precisely the same disease, the only difference being the greater intensity of peritonitis when it assumes the form of puerperal fever. Even the "peculiar congestive disease" of Dr. Armstrong he considered to be only peritonitis of such intensity as to prostrate the

* Ibid. p. 71-3.

† Ibid. p. 84.

* Op. cit. p. 92.

† Op. cit. p. 151.

‡ Op. cit. pp. 153, 155.

§ Op. cit. p. 164.

vital powers and to overcome all reaction. The first case of this kind that he met with happened at Woolwich, in 1808. "The unfortunate person was the wife of a soldier in the Royal Artillery. . . . She shivered about eight hours after delivery, and continued to sink, having pain in the epigastrium, and tumefaction of the abdomen, with diarrhoea. coldness over the whole surface of the body preceded her death, which followed in a few hours. On opening the body, there was great tumefaction from flatus; the uterus was ill contracted, but it contained no coagula, and I may here remark that there had been no previous hemorrhage. There were two or three dark-coloured patches on the intestines, and the veins of the different viscera of the abdomen were so distended with blood as to force the idea on our minds that the blood of the whole body was concentrated in them."* This case produced at the time a deep impression on his mind: he considered it as perfectly analogous to venous congestion produced by other causes; by sudden changes of temperature, as taking ice or very cold water when heated; by certain diseases, as yellow fever, dysentery, cholera, beriberi. In all these cases he quotes evidence to prove that the treatment by bold depletion was essential to relieve the congestion and the oppression of the disease, and hence infers that the congestive form of puerperal fever should be relieved in the same manner. In his reasoning, however, he seems very like one *l'em cum life resolves*. The treatment of the collapse of cholera and yellow fever by depletion is just as warmly disputed as this treatment in puerperal fever. The argument that the collapsed stage of cholera and Armstrong's "congestive disease" agree in being inflammations in their climax of intensity to be relieved by bold depletion, falls to the ground when submitted to the test of experience. The treatment of cholera by depletion and by large doses of calomel had been brought forward with the same energy, and supported by the same arguments, as Dr. Mackintosh advanced for puerperal fever, but it was soon found to be a most fatal practice, and has long since been given up. The same, I believe, applies to yellow fever; and hence these parallel diseases give no support to the theory that the form of puerperal fever described by Armstrong is only peritonitis in its highest degree of intensity. Dr. Mackintosh's views of treatment met with a warm opponent in the late Dr. Hamilton, a controversy of course springing up, and, as in too many in-

stances, a discussion commenced with arguments finished amid the personalities of a dispute. Dr. Mackintosh's essay was published in 1822; and, consequently, forms the last link in the chain of experience that connects the researches of Dr. John Clarke with that of Dr. Gooch.

From 1792 to 1822, a period of thirty years, the doctrines and practice of Gordon, Hey, Armstrong, and Mackintosh, more or less prevailed, opposed, it is true, by Hamilton and others; but the evidence of success was strongly in their favour, and their practice was generally adopted. Such was the state of opinion when Dr. Gooch turned his attention to puerperal fever. He was appointed physician to the Westminster (the General) Lying-in Hospital in 1812, and had ample opportunities of observing the diseases of lying-in women among the poor of London and its neighbourhood. He remarked how much more healthy the hospital was at one time than at another, and that at particularly unhealthy seasons numerous cases of decided puerperal fever presented themselves. The disease generally began very suddenly, and he soon found that he had to deal with a very fatal one. When he saw the patient after it had been going on two or three days (which was no unusual circumstance among the out-patients) he seldom or never saved them. Within the hospital he saw it earlier; and, when the patient was seen soon after the attack, he found a different—a more inflammatory group of symptoms. He therefore resorted to general bleeding and purging. "It was soon clear that bleeding and purging did more good than any remedies we had tried, and our success in the treatment of this disease was decidedly increased."* By the treatment of Dr. Gordon, Dr. Gooch found that, provided he saw the patient within a few hours of the attack, he could generally arrest the disease. "Thus, the conclusion to which I came was that the puerperal fever which prevailed on several occasions between 1812 and 1820 was a fever attended by acute inflammation of the peritoneum; that the inflammatory stage was often very short, soon terminating in great and irremediable effusion into the peritoneum; that the disease was curable only in the inflammatory stage by active bleeding and purging; and that, although it was difficult to draw the line, and say where the inflammatory stage terminated in that of effusion, because it differed in length in different cases, yet that it was often incredibly short, and that the treatment had not a fair chance of success unless begun dur-

* Mackintosh's Treatise, p. 24.

* Gooch, p. 44.

ing the early hours of the disease. Thus my experience agreed in all the principal points with that which had been so forcibly stated to the public by Dr. Armstrong and Dr. Hey.*

However, notwithstanding his strong convictions in favour of their practice, cases afterwards came under his notice that excited his suspicions that, at least, there were some exceptions to bleeding and purging. The first was an hysterical lady, who got a dose of salts and senna on the second day after her delivery. She was attacked with a violent diarrhoea, followed by pain and tenderness over the abdomen. Her medical attendant insisted on bleeding her, which Dr. Gooch with much difficulty prevented. Fomentations and Dover's powder, ten grains every four hours, relieved the symptoms, and she recovered. This case was not exactly puerperal fever, although somewhat allied to it. Several other cases afterwards occurred to him of a similar undecided character, but resembling puerperal fever sufficiently closely to be mistaken by a practitioner of average observation. In all these cases depletion and purging were highly injurious; opiates and fomentations were the most serviceable. In the winter of 1824 puerperal fever was prevalent and fatal in London and its neighbourhood, and Dr. Gooch saw the disease repeatedly in consultation. Like Dr. Gordon, he found the pestilence fastening upon some unfortunate practitioner and ruining his reputation; but the character of the disease was altogether different from what he had before observed. The first case (Case IX.) showed its symptoms the day after delivery. "She was found complaining of considerable pain in the abdomen, great tenderness, oppression at the precordia, and difficult breathing. The pulse was rapid; but the most remarkable symptom was immense distension of the abdomen."† She was not bled: a gentle purge was given, and afterwards opiates, but she died on the third day. "The body was opened the next day. The intestines were found enormously distended with air; but in the peritoneum there was neither redness, adhesion, nor effusion of any kind. The second case (Case X.) was more conclusive. After a common labour of the fourth child, the patient, on the evening of the third day, was found to have a diffused pain and tenderness of the belly, with a pulse of 140, *not weak*." The symptoms had not lasted six hours; the bowels had been emptied by a purgative; fourteen ounces of blood were taken away

immediately, and two grains of calomel, with five of compound powder of ipecacuanha, were given every four hours." She was again bled, and relieved by the abstraction of ten ounces more blood. The next day she was not so well, and died on the third day. "There was neither redness nor adhesion of the peritoneum, nor effusion of any kind into its cavity."

These cases Dr. Gooch saw in consultation; but he relates one interesting case (Case XIII.) that he saw from the beginning to the end of the attack. The patient was a lady whom he had attended in several previous confinements. Her labour was very quick: she was quite well on the second evening, and on the following morning took the usual dose of salts and senna: it operated violently, and was followed by the diffused pain and tenderness of the abdomen, with a rapid pulse; she could neither turn in the bed nor bear pressure on the abdomen; but her skin was not hot, nor the pulse hard. Dr. Gooch gave twenty minims of Battley's sedative solution, to be repeated every two hours for three doses; the pain was easier, but the pulse was still rapid. Dr. G. wished a consultation to decide about bloodletting: "the prevalent state of medical opinion on the subject determined us to use it."‡ It was carried to faintness, four cups and a half being taken; twelve leeches were next applied to the belly, and these were succeeded by the usual fomentations of scalded bran, and an opiate. The following morning two drachms of sulphate of magnesia were given every four hours. She became much worse, and died in less than forty-eight hours from the commencement of her symptoms. "In all these cases (Dr. Gooch remarks) the striking circumstances were the rapidity of the disease and the absence of morbid appearances in the peritoneum after death, although during life the whole surface of the abdomen had been painful and tender, and the pulse had been rapid as in puerperal fever. Death came on like faintness; the patient got weaker and weaker hour by hour, and then died."† Dr. Gooch quotes the experience of Mr. Dalrymple, of Norwich, as being similar to his own, and also that of Mr. J. A. Hingeston, resident house-surgeon to the Westminster Lying-in Hospital, who kept a journal of cases, which were afterwards published.‡ "These cases were all attended by pain and tenderness of the belly, with a rapid pulse: the pain remitted, the skin was moist, and the pulse full and com-

* Gooch, p. 60.

† *Ibid.* p. 53.

* Gooch, p. 78.

† *Ibid.* p. 80.

‡ *MEDICAL GAZETTE*, No. xi.

possible. Most of them were cured by keeping the abdomen covered with a large, thin, hot linseed poultice, and giving ten grains of compound powder of ipecacuanha, repeated till the pain was gone. If the bowels were constipated, a purgative was previously given: if they were not so, the purgative was postponed till the pain had subsided."* In one case of a more inflammatory character, depletion to twenty ounces were drawn from the arm, and mercury was given. "After the bleeding she had frequent fainting for several hours, and life was reduced to a low ebb. . . . A striking contrast this (Dr. Gooch observes) to the way in which bleeding to double the extent was borne in the peritoneal fevers from 1810 to 1820."

Dr. Gooch also quotes the experience of Dr. Ferguson, who was then also physician to the Westminster Lying-in Hospital. But we shall let Dr. Ferguson speak for himself in our next lecture.

CASES OF PREGNANCY, NOTWITHSTANDING PREVIOUS SEVERE INJURY TO THE ORGANS CONCERNED IN CHILDBIRTH. BY DR. LEOPOLD, OF MEERAN, SOMERBURY.

Case 1.—Mrs. — was delivered with instruments, on the 1st of January, 1843, by an experienced accoucheur, and suffered considerably from ischuria on the following day. On the 6th, Dr. Leopold saw her in consultation. A large hard tumor, tender to the touch, filled the greater part of the vagina. The nature of this tumor was doubtful, and continued so until the 9th instant, when, having taken a strong purgative, she felt during its action a substance pass from the vagina. Copious hæmorrhage occurred, followed by syncope. On examination the prolapsed and inverted uterus was found between her thighs, lying in a pool of blood, urine, and feces. It was immediately washed and returned. The hæmorrhage ceased; the fundus uteri could be felt beneath the abdominal parietes. The patient was confined to the recumbent posture for many weeks. She perfectly recovered her health, and was delivered of another child two years afterwards without instrumental aid. In this case it is possible that partial inversion of the uterus may have been occasioned at the time of delivery by adhesion of the placenta, and that the subsequent accident converted this into complete inversion and prolapsus.

Case 2.—Mrs. —, the mother of five children, was in labour on March 30th,

1844. The arm presented, and it was necessary to turn. During the operation the patient exclaimed that she was suffering excruciating pain in the left side of the pelvis. She threw herself about in the most inconvenient positions just as Dr. Leopold had reached the foot. Much care was required to complete the delivery, as the pains also flagged. The placenta was expelled without hæmorrhage. At midnight of the same day Dr. Leopold was summoned to her, and found her lying with all the symptoms of severe hæmorrhage, but only a few ounces of blood were found in the bed. On passing the hand into the vagina several large coagula were expelled. The uterus was found lying over to the right side of the pelvis. The os uteri was open, and the uterus contained some coagula, which were quickly expelled by the contractions of the organ from external and internal stimulation. On the left side of the vagina, the hand entered a large sac full of blood. The orifice of this sac was about an inch from the os uteri, and was sufficiently large to admit the hand without force. Its walls were formed by the iliac bone, by the abdominal parietes, as high as the crista ili, and by the iliacus internus muscle. A large quantity of coagulated blood was removed, and further hæmorrhage restrained by continued external application of cold. The patient refused all internal remedial. The prognosis was unfavourable. The extent of the injury indicated a remote origin; and, on inquiry, it was learnt that the patient had suffered from pain in the left side and hip during the whole period of her pregnancy, but had been compelled to follow her work at the loom.

The pains during labour were frequent and violent. A short time before the rupture of the membranes she had experienced a sensation as of a sudden and painful giving way of the parts on the left side. She had suffered from peritonitis after her previous confinement. A chronic abscess had no doubt existed in this spot, and was ruptured during labour by the force of the pains and the cross position of the child. The patient had again on this occasion an attack of puerperal fever, from which she recovered in three weeks. A purulent discharge continued for upwards of three months, after which she perfectly regained her health and strength, with the exception of diminished power in the left hip joint. Two years afterwards she was again confined, without any unfavourable occurrence.

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* Gooch, p. 82.

Original Communications.

BED-SIDE SKETCHES.

BY JOHN CHARLES HALL, M.D.

Fellow of the Royal College of Physicians, Edinburgh; Member of the Royal College of Surgeons, London; Author of "Remarks on the Treatment of some of the more important Diseases, including the principal Diseases of the Eye," &c. &c. &c.

"Concordiâ res parvæ crescunt."

[[Continued from p. 408.]

NO. V.—THORACIC CONSUMPTION.

COD-LIVER oil, as a remedy for the cure of consumption, has now been for some time occupying the attention of the medical profession, and it certainly is the duty of every practising surgeon and physician to record the results of its employment in his own practice; thus will be gathered from every part of the kingdom a number of valuable facts, from which, in the end, some correct and very important conclusions may be drawn: from such an accumulation of cases it is obvious the truth can only be obtained; for the experience of any individual, be that experience ever so extensive and prolonged, would be altogether unavailing for such a purpose. To assist, however humbly, in such a work, *Thoracic Consumption* has been selected as the subject for our present inquiry.

Can consumption be cured? can it be arrested? *can it be prevented?* are questions of the most momentous import; for not only do they concern the members of our own profession, individually and collectively, but in their solution the fathers, mothers, sons and daughters, of this country, are most deeply interested; for how few families can for many generations hope to claim exemption from the attacks of this relentless destroyer, which selecting but too often the fairest and the most beautiful of our sisters, or the most promising and intellectual of our sons, quickly carries them to the dark silence of a premature grave. The deaths from consumption in England and Wales amounted during the past year to many thousands. In London alone, in 1849, 6317 died (and during the last five years no less

than 33,524) of thoracic consumption.* Does tubercular phthisis (*thoracic consumption*) admit of cure, and if so, does cod-liver oil prevent the deposit of tubercles, and when tubercles are already deposited what influence does it exert upon them? are the questions to the answering of which attention must be more especially directed.

From the results of the exhibition of the oil in our own practice, and from what has been gleaned from the experience of other physicians, we can have no hesitation in stating that much benefit has arisen from its employment, even in some of the worst cases of phthisis; but we would not trust alone to this medicine: it is only a part of that plan of treatment which requires to be most steadily persevered in, and which, in detailing certain cases, an endeavour will be made to discuss.

But first let thoracic consumption be clearly defined, and also the signs denoting the arrival at those several stages of that long journey of hopes and fears by which it conducts its victims to the tomb; for it would be unfair to claim for any remedy powers which it does not possess, or to swell the list of supposed cures by cod-liver oil, after giving it in imaginary cases of phthisis. It will be well, then, 1st, to define what is meant by the term *thoracic consumption*; 2d, the signs by which the disease is detected at each period of its existence; 3d, the treatment of consumption. This division will of course embrace also an examination of the measures to be employed for preventing its development, more particularly in children and young persons, in whom an hereditary taint is known to exist.

a. *Thoracic consumption*.—If we were to regard phthisis as confined to the

* The polite attention of the Registrar-General has enabled us to compile for our readers the following table from the materials he was so kind as to supply, and for which we take this opportunity of returning our best thanks.

Deaths in London from	1845	1846	1847	1848	1849	Total deaths in 5 years.
1. Thoracic Consumption . . .	6731	6890	7010	6556	6317	33,524
2. Tabes Mesenterica . . .	524	861	990	856	841	4,142
3. Bronchitis . . .	1686	2431	4343	3030	3243	14,733
4. Pneumonia . . .	3896	3151	4290	3499	3593	18,429
5. Laryngitis . . .	79	121	208	187	192	787

lungs only, a manifest mistake would be committed: thoracic consumption is only an offspring of a peculiar constitutional disease, the favourite site of which is the lungs; and why? It would be foreign to the purpose for which these papers are written, to enter at length into the causes influencing the deposition of tubercle; the circumstances which deteriorate the materials of nutrition, and thus induce the deposition of cacoplastic and aplastic matter, may be either local or general. Of the local causes, Dr. Williams mentions—"congestion, and the lowest and more chronic forms of inflammation," as capable of producing cacoplastic deposits, but even in such cases he is of opinion that general causes have also no inconsiderable share in such formations; "that is, a degraded state of the plasma of the blood."

It has been stated by Dr. Campbell that the lungs are more liable than any other organ to tuberculous deposits, from the very minute size of their capillary vessels, which form a filter to the blood, and thus arrest the further progress of the tubercular matter: if this be so, why does the deposit not take place abundantly in muscular fibre? The tubercular deposits have been proved, microscopically, by Messrs. Addison and Gulliver, to be extravascular, sometimes on the surface of the air-cells, and in other cases in or under the membrane of which they are composed.

In this peculiarity of constitution on which the existence of thoracic consumption depends, there is found in the blood an increased liability to deposit: there is, it has been proved, in the blood of individuals who have the misfortune to labour under the tuberculous cachexia, an altered state of the red particles, and a great excess of fibrine: now, from fibrine in a healthy state is developed the basis, or plasma, whence the reparative process is derived: this plasma, in a healthy individual, has a capacity for life, and is capable of organization; but when the scrofulous diathesis exists, this capacity is *lowered*, and the material for nutrition becomes what Dr. Williams has happily termed "cacoplastic;" capable only of a very low degree of organization, or perhaps not organizable at all, as is seen in yellow tubercle, pus, and cheesy matters. Fibrine always is found in superabundant quantities in the blood of consumptive patients, but the products are

either "aplastic" or "cacoplastic." A recent writer, Mr. Gulliver, states that the fibrine of the blood in these cases exhibits, under the microscope, fewer finely defined fibres and regular nuclei than is natural, more closely resembling coagulated albumen than the more animalized form of protein: the red particles are deficient in quantity, and the fibrine is also more opaque, and less elastic, than in that which is derived from the healthy blood presenting numerous fat globules, and a predominance of granular matter.

In childhood and youth, the lymphatic glands are very prone to strumous inflammation, especially the mesenteric and cervical glands. In more advanced life tubercles exist more frequently in the organs of respiration, and they are deposited more commonly and thickly upon the posterior and superior portion of the upper lobe: here tubercles, if existing at all in the lungs, are nearly certain to be found: indeed, that distinguished pathologist, Dr. Carswell, does not scruple to affirm that when they are found in any other portion of the lung they are of secondary occurrence: to this rule one exception requires only to be made—viz. an attack of inflammation in some other portion of the lung which may have occasioned the first deposition of tubercles in that part. That tubercles should be deposited in the lungs more than in any other organ, is not to be wondered at, when it is remembered that they are highly vascular, and that a very large quantity of blood is constantly passing through them, so that it seems hardly possible for them to escape a participation in any disordered condition of that fluid. The softness and yielding nature of the pulmonary textures renders them more readily adapted for the permission of effusion than such structures as are more dense in texture; the exposure of the lungs to external causes of disease, such as cold damp-air, entering directly by the windpipe, or operating through the medium of the circulation; and, lastly, from their being the principal seat for the production of fibrine,—fibrine being found in much larger quantities in arterial than in venous blood,—all these circumstances undoubtedly render the lungs the most frequent seat of tubercle.

Not only are tubercles deposited with singular uniformity in the upper and back portions of the upper lobes, but

the left lung is more frequently attacked than the right. Thus it was shown by Louis, that in 88 cases in which phthisis had proceeded to the complete disorganization of the upper lobe of the lung, 28 were of the left, and 10 of the right. In eight cases in which the pleura was perforated by the extension of tubercular disease, 7 were on the left side. In seven cases in which only one lung was affected, in four of these cases it was the left. In 100 cases of thoracic consumption which came under the care of Dr. Cotton during the first dawning of the disease, he found the seat of tubercle to be the apex of the left lung in 51 cases, of the right in 27; in 8 patients the deposition appeared alike in both apices, and in 14 the deposition was unequal. It would appear that the opportunities for investigating this disease which the hospital for consumption at Brompton has afforded go to confirm the conclusion to which Dr. Carswell had long ago arrived, for in 500 out-patients only 4 presented signs denoting the lower lobes to be the principal seat of tubercle. Thoracic consumption, therefore, presents a very striking contrast to pneumonia, for in 210 cases which came under the observation of Andral, it was twice as common on the right side as the left. The following table gives the seat of 868 cases of pneumonia, treated by M. Lombard, of Geneva.

No. of cases.	Right lung alone.	Left lung alone.	Both lungs at once.
868	413	260	195

There is yet another difference between phthisis and pneumonia. We have seen that in the former the upper lobes of the lungs are for the most part affected; in the latter, in the great majority of cases, the lower lobes will be attacked. Now then inflammation may commence in the superior lobes; but, when we find the upper portions of the lungs involved, it is generally in cases where the disease has ascended from below. There may be exceptions, but this is the rule.

We have now described the deposition of tubercles, as we have seen them in considerably more than one hundred bodies which we have had an opportunity of examining in this country and

in the schools on the continent; and we would add that they are situated on the mucous surface of the vesicles, and in the small bronchial tubes which lead to them. Masses of these diseased air-cells in some bodies may be observed to have run together into one huge mass. In most cases these tubercles will be seen varying in size, in the same lung, from a small shot even to a large egg. Sometimes the tubercular matter is regularly diffused over a considerable extent, filling up the whole of the vesicular and interstitial portions of the lung, without limit or circumscribing boundary. The lung then appears as though it had been minutely injected with some fluid which had become dry and hardened in process of time; and we have an exhibition of the *tubercular infiltration* of French authors. In our opinion (and we are supported by that truly practical physician, Dr. Watson) there is no evidence to show that inflammation is necessary to the formation of tubercle; but, to quote his words, "an undoubted and most important connection exists between the occurrence of inflammation and the occurrence of tubercles. *Tubercles will cause inflammation, and inflammation will determine the development of tubercles*" (p. 200, vol. i.).

Once deposited, the tubercles may remain even for years in the same condition, encircled by perfectly sound lung; they remain in what is technically termed a crude state. Much will depend upon the extent of lung involved in the disease—much on the nature of the deposit itself. In some constitutions, where the strumous diathesis exists to a great degree, and where the blood is, as it were, surcharged with an enormous quantity of aplastic material, the tubercles are from the first of a yellow colour, soft and friable, and quickly break down into a moist cheesy substance. In other cases, where the nutritive powers are not so lowered, the tubercles are at first of a grey colour, and some few fibres and cells may be traced in them; but this state is not often long permitted to exist: an attack of inflammation comes on, from some cause or other; they lose the little brightness they at first possessed, and become changed into that form of tubercle which Laennec first introduced to our notice.

This change first takes place in the

centre, which arises, as Dr. Williams supposes, from the fact that, being devoid of blood-vessels, the centre is further removed from the vivifying influence of the blood. It was suggested by Dr. Elliottson, that the softening of tubercles is the result of a spontaneous chemical change, and the author already quoted agrees with him so far; but he also regards this chemical change to be promoted by the fluids of the surrounding parts. So long as tubercles remain dry, this change does not take place; but, on an afflux of fluids around them, they soon become soft. Mr. Gulliver has drawn attention to the very singular increase of fat globules in softened tubercle.* Although, as already stated, the tubercles may remain even for years in a state of rest, sooner or later, in the great majority of cases, inflammation is set up around them. This inflammation is of the strumous type; thin pus is thrown out around the deposits, which become loosened, and at length the whole is expectorated. This is the way in which tubercles are got rid of; and, singular as the remark may appear, it is nevertheless true, that it is by this process of nature to get rid of the extraneous matter the unfortunate patient is destroyed. There is nothing malignant in the nature of tubercle; and, if the quantity deposited in the first instance be small, even when this process takes place the patient may recover, provided no additional crop of tubercles be sown. This, unhappily, generally takes place: the constitutional taint remains; and no sooner has the poor patient got rid of one lot of tubercles than the process is repeated, and at length, worn out and exhausted, he dies.

Some years ago we saw a gentleman in whose lung a vomica most undoubtedly existed; but it had, happily for himself and for his family, existed singly: it was in time completely emptied. It gradually contracted, and is now completely obliterated. We have examined one or two bodies in which this state of things was very beautifully demonstrated. When the sides of these cavities come together, a

puckering takes place of the pleura on the surface of the lung; beneath this puckering will be found a collapsed vomica, the inner surface of which resembles cartilage; but, unfortunately, the result, at least hitherto, has been that the tubercular bodies continue to increase, inflammation is set up, the tubercles, becoming further degenerated, soften and are expelled, leaving larger or smaller caverns. We have seen them not bigger than the end of the finger, and sufficiently capacious to contain at least a pint of fluid. Sometimes the whole of the upper part of the lung is excavated into a large cavern. We have the notes of the post-mortem examination of two bodies which we opened, the one on the 15th, and the other on the 16th of June, 1856, in the presence of Mr. R. J. Pollock, of Kensington. In both were very large cavities, more particularly in Mr. Kinner, set 40, a carpenter. There was a cavity in both lungs, but more especially in the right, which was almost destroyed. This large vomica appeared the result of the amalgamation of several smaller ones. It was irregular in shape, and divided into compartments by bands, which crossed it in various directions. There were also, in both these cases, a good many pervious bronchial tubes opening into the cavities, and appearing as though they had been divided just before entering the excavations. No blood-vessels were found in these cavities, nor have we seen them in the great majority of the numerous subjects dying from phthisis that we have had an opportunity of examining. This would appear to arise from the yielding nature of the coats of the vessels permitting their being pushed out of the way and flattened. Some are thus rendered impervious by pressure from without, and others are probably obliterated by accumulations in their interior. Sometimes a considerable blood-vessel does get laid open in the formation of a vomica. This happened to a young lady under our care, who was seen by Mr. Chapman also, and whose death was the result of hæmorrhage. We saw a young man, in consultation with Mr. Harrison, of this town, about a month ago, in consequence of an attack during the night of rather copious exhalation of blood, which tinged the matters expectorated, and which evidently came from a large cavity in the upper portion

* Mr. Davy discovered *oleine* and *margarine* in opaque exudation corpuscles from the lungs. Dr. Williams has so many times detected fat globules in deposits in the kidneys, and in the vegetations on the valves of the heart, that abundant proof is before us of the liability, in all degraded plasmata, to the production of fat.

of the left lung. The case is different with the bronchial tubes, which do not admit of easy compression; and, in the blending together of the softened tubercular bodies, by which these cavities are created, the air-tubes included within this pulpy mass become stopped up by it; and, when the whole breaks down by the process of scrofulous suppuration already pointed out, they are coughed up with the rest. Their open mouths remain at the point where the tubercular matter stopped; and, when this also becomes soft, channels are formed through which it may get into the trachea.

There is yet another way in which (when limited in extent, and when the additional deposition of tubercles can be prevented) consumption may be cured—(we have already alluded to the contraction and ultimate obliteration of very small vomicae)—which is this: either the more fluid portions of the tubercles may be absorbed, or the earthy salts they contain may concretize. The whole is then converted into a contracted, hard, putty-like mass. This is sometimes coughed up, or in some cases remains for years in the lungs without doing any great harm. This circumstance has been dwelt upon at great length by Dr. James Turnbull, of Liverpool, in a very able paper published in the last number of the *London Journal of Medicine*. This putty-like matter is composed principally of phosphate of lime. The conversion of the yellow and softened tubercle into calcareous matter would appear the result of the absorption of the animal matter, and the deposition of an earthy salt in its place. Thus proof is afforded of the occasional absorption of tuberculous matter, and additional evidence is furnished by those cases in which it is observed to have accumulated in the bronchial and mesenteric glands; and, when in the lungs, cicatrices, with a little cretaceous matter in them, are the only traces that remain.* We heard of a case only a

short time ago in which one of these chalky bodies was coughed up, the patient remaining quite well to this day. It may be well to refer the over-sanguine (and we all, as we get older, find cases far more difficult to cure than, in the happy inexperience of youth, we once thought them) to the remark of that truly scientific, cautious, and experienced physician, Dr. Watson, who writes, in his 56th Lecture—"Let me tell you, while I think of it, that the expectoration of these chalk-like concretions, denoting, as it does usually, the existence of pulmonary consumption, marks at the same time the chronic character of the case. I am acquainted

that the calcareous bodies which are found in the lungs are the result of the transformation of tubercle. Dr. Turnbull had last year a patient in the Liverpool Infirmary who died of tubercular peritonitis. The abdomen contained "a very large quantity of matter like mortar, and the mesenteric glands exhibited almost every form of tubercular disease, some being in the state of crude, cheesy tubercle, and others undergoing transformation. In this case the liver was found to be "fatty,"—a fact tending, the author of the paper thinks, to show that fatty degeneration of the liver, so often seen in persons who have died of thoracic consumption, cannot be a result of the function of respiration being interfered with; but that it has some peculiar relation to tubercular disease generally, and is more frequently found in pulmonary consumption, because, as we have already seen, the lungs are the organs in which tubercles most generally, and in the greatest abundance, exist. In a paper in the *Edinburgh Medical and Surgical Journal* for April 1845, Dr. Bennett considers the existence of cicatrices which denote the spontaneous obliteration of a vomica as far from uncommon. Andral gives the histories of eight such cases, and Louis relates two or three. In one of the chapters of his interesting work headed "Examen de cette question: la guérison de la phthisie est-elle possible?" Laennec fully enters into the subject of the cure of consumption, not only by the cretaceous transformation of tubercular matter, but also by the cicatrization of cavities. *Bleht or ten* cases are related, and in three this celebrated stethoscopist was fully satisfied that he had traced the healing of cavities, and recoveries took place after all the worst symptoms had supervened. We must, therefore, admit that occasionally, under certain circumstances, consumption undergoes a spontaneous cure: this is a fact as well established as any in the whole range of medical science; but we cannot help adding, in the words of our worthy friend Dr. Wood, the secretary of the College of Physicians of Edinburgh, that "this takes place by the efforts of nature;" at any rate much more frequently than as the result of the nostrums which those who are so anxious to come before the public as "*consumption cures*," vaunt as specifics. The very fact of the number of cases in which post-mortem examinations display cicatrized cavities in individuals where consumption was never for a moment apprehended during life, and for which neither naphtha, cod-liver oil, or any other specific was exhibited, should at least teach us to pause before we say, in other cases, that cicatrization has been the result of treatment.

* With regard to the cure of pulmonary consumption, Laennec remarks (*Forbes' Translation*, 2d edition, p. 358):—"From considering the great number of the phthisical and other subjects in whom cicatrices are found in the summit of the lungs, I think it more than probable that hardly any person is carried off by a first attack of phthisis. In the *Archives Générales de Médecine*, 1839, is a paper from the pen of M. Rogné, on the curability of phthisis, in which the details are given of several cases which prove

with a gentleman who, though delicate, enjoys a fair share of health, and who has for years been coughing up at intervals little branching fragments, like bits of white coral, consisting principally of carbonate and phosphate of lime, and evidently moulded in the smaller bronchial tubes." There is a wonderful difference between these chronic cases and such as are acute: in the former, death may quickly arrive, either from the state of the constitution being so highly tuberculous as only to require some trifling cause to induce a deposition to a considerable extent in both lungs at the same time. All the symptoms are unusually severe: the cough increases day by day; the expectoration becomes more and more copious, and quickly goes through its various changes; the hectic fever is violent; the morning perspirations are copious: next diarrhoea sets in, and in six weeks or two months the patient dies of what is popularly and very correctly styled "*a galloping consumption*." In the Archives Générales de Médecine, vol. ii. p. 205, Andral relates four cases of this rapidly fatal form of consumption: three of them occurred in young persons, and terminated in from three to five weeks. It is worthy of note that such cases usually occur in the young; and in such as have the tubercular cachexia strongly developed the disease often commences after scarlatina or measles, &c. Now, if such cases are treated by the careless or inexperienced as wholly inflammatory, and active measures be resorted to, a fatal result will often show the fallacy of the favourable prognosis they may have been deluded into pronouncing. Such mistakes may generally be avoided by a little careful inquiry, and by remembering that these attacks usually occur in the members of families of a strongly denoted strumous constitution. Sometimes tubercles, though unsuspected by the patient's family or by himself, have in other cases existed for some time in the lungs: this tuberculous disease, though *latent*, has been making silent and unmarked inroads. An attack of catarrh follows an imprudent exposure to cold during the winter months: this produces pulmonary congestion. Perhaps an attack of hæmoptysis gives to the patient the first idea of his danger; and now the case soon runs a rapid course, owing to

the previously advanced state of the tubercles.

Chronic thoracic consumption, to which the remark above quoted has directed our attention, generally exists at a more advanced period of life—after the 40th year; the acute form occurring most frequently in the young. This chronic form of phthisis, first described by Bayle and Laennec, may exist during the greater part of a man's life: its early stages are little marked; it often occurs in merchants' clerks and others leading a sedentary life; and as such are often the subjects of dyspepsia, although they may have slight cough, and be languid, and little capable of exertion, the stomach is generally thought to be the offending organ, and this, in the opinion of the patients and their family, becomes quite clear when they see the cough leaving them in the summer, and that a few weeks in the country quite renovates them,—that they return with good looks and a good appetite, having gained many pounds in weight. But with the winter the cough returns: they become thin and languid, incapable of much exertion, and, though attending to business as usual, that which was once a pleasure now becomes irksome and fatiguing. The state of health varies a good deal: they are liable to acute catarrh, pleurisy, or pneumonia; take cold after the slightest exposure, and, when an attack of acute catarrh comes on, it is often severe, and is sometimes attended by fever and copious expectoration—symptoms which often seem to threaten life: they recover, appearing to have a sort of chronic catarrh; the appetite is good, but what they eat appears imperfectly assimilated; they are short-breathed, and cannot endure much either of mental or bodily exertion. If a patient labouring under this form of chronic phthisis be in the upper or middle walks of life, and not obliged to expose himself to the vicissitudes of temperature to which our fickle climate is obnoxious, he may live for years, delicate it is true; but the cough is little regarded—it almost goes away in the summer, and the dyspnoea has come on so slowly as hardly to be noticed. We have often been told by such patients that they have always "been short of breath since boyhood, and that they remember they could never run and jump

and play at cricket like other lads." This form of thoracic consumption appears of long growth, to be most generally present in the higher ranks of life, and in those in whom there is no very marked hereditary predisposition. It may occur in the merchant's office, and in those engaged in unhealthy occupations; but the evil day is put off, by perhaps living out of town, which secures a walk and fresh air night and morning, or by a few weeks spent in the country, free from the cares and anxieties of business. An examination of the chest seldom leaves any doubt as to the nature of this affection: one or both the clavicular regions will yield a dull sound on percussion, and, on taking a deep inspiration, the upper part of the chest is seen to move much less than in a healthy individual. On applying the stethoscope, the *expiratory murmur* will be considerably prolonged, the voice will be more resonant than is natural, and the sounds of the heart will be very distinct over the dull patches; condensation having taken place in the lungs, from the deposition of tubercles, they have become better conductors of sound. Sometimes, says Sir James Clark, in these chronic cases the "tuberculous matter becomes softened and expectorated, leaving cavities at the summit of the lungs, some of which, having discharged their contents, are either in the process of cure or actually cicatrized."

That such a patient may exist for years if his habits of life be regular and temperate, and if he avoid exposure to the night air and to other causes having a tendency to produce inflammation of the lungs, we have the authority of the same distinguished physician for asserting; but then such a one is ever in the greatest danger—the grave is daily open before him, and a slight cold, an attack of bronchitis, or any febrile affection, which would have been of trifling moment in a healthy individual, cuts the slender thread of existence, and death, preceded by all the ordinary well-marked types of consumption, quickly occurs. In some of the cures that have recently been reported as taking place in consequence of the administration of cod-liver oil, some of the patients are stated to have reached the age of 35, 36, and 40. Of the cases of cure reported by Louis, one was aged 45, and the other 50. This chronic form of the

disease is very common also amongst bricklayers' labourers and the poor Irish generally in the metropolis: exposed to every inclemency of the weather, scantily clothed and badly fed, one attack of catarrh, bronchitis, pleurisy, or inflammation of the lungs, is quickly succeeded by another, until, at length, the whole of the lungs, having the pleura more or less adherent over their whole extent, present a mass of disease partly tubercular, and partly the result of inflammation. This chronic type of thoracic consumption is well deserving the attention of the profession: in its early stages it may be arrested, and this can only be accomplished by such improvement of the general state of the health as shall remove or considerably mitigate the glandular diathesis. Diseased conditions of the digestive organs were mentioned as often present at the commencement of this chronic form of phthisis: and this irritation of the digestive functions, the result of a congested condition of the liver and abdominal vessels generally, demands the most serious attention of the physician. The statistics of *thoracic consumption*, as an indication of the advantages of any particular line of treatment, require to be received with very great caution: we have within the last few years seen so many vaunted remedies which have gone up like rockets fall to the ground as sticks, that we feel bound to receive the results of the treatment of consumption by any particular remedy with the greatest possible caution; and although we have evidence that the exhibition of cod-liver oil has been followed by marked advantage, not only in the wide field for inquiry which the Hospital for Consumption at Brompton affords, but also in the comparatively limited sphere which our own private practice presents, we have yet to learn that cod-liver oil is a *specific* in the cure of *thoracic consumption*, any more than naphtha, and a thousand other remedies which have one day been spun to the most exalted position by the whirligig of fortune, the next, "as fickle fancy changes," to follow their predecessors in their fall: still we readily admit we have seen more advantages arise from the oil than from any other remedy with which we are acquainted. The following table, extracted from the report to which allusion has already been made, shows the ages in decimal

periods of 2679 males, 1679 females, labouring under pulmonary consump-

tion, and the per centages of the sexes at each period of life:—

Ages.	Males.	Per cent.	Females.	Per cent.	Total.	Per cent.
0 to 5	9	0.33	12	0.71	21	0.48
5 to 15	125	4.66	112	6.67	237	5.41
15 to 25	696	25.94	574	34.19	1269	29.11
25 to 35	963	35.50	578	34.42	1531	35.18
35 to 45	570	21.27	271	16.14	841	19.29
45 to 55	251	9.37	110	6.55	361	8.28
55 to 65	68	2.53	21	1.25	89	2.04
65 to 75	8	0.29	1	.05	9	0.20
Total males . . .	2679	Total females	1679		4358	

Below the age of puberty tubercles appear to exist (see the tables prepared by Paparone*) most frequently during the third, fourth, fifth, and sixth years. M. Andral states,† "tubercles are most prevalent from four to five; they appear in much greater quantities, and in a greater number of organs at once." After the age of puberty, the greatest number of deaths occur between the age of twenty and thirty; the next in proportion between thirty and forty; the next between forty and fifty; the succeeding grade of mortality sometimes is found between fifteen and twenty, sometimes between fifty and sixty. All writers agree in stating that one half of the deaths from thoracic consumption occur between the twentieth and fortieth years, and that its maximum is reached at thirty; from this age the rate of mortality sensibly diminishes.

In considering some of the leading points of interest in connection with the pathology of tubercular consumption, all reference has been excluded to the diseases which attack the workmen of particular trades; those who are obliged to remain in workshops exposed for many hours to an atmosphere loaded with pulverulent bodies, or charged with gaseous substances of an irritating quality. Dr. Alison states‡ that there is hardly an instance of a mason regularly employed in hewing stones in Edinburgh, living free from phthisical symptoms to the age of fifty. The inhalation of metallic particles is equally

injurious to the respiratory organs; and as the history of the grinders of Sheffield affords one of the most lamentable instances of the fatal consequences resulting from the inhalation of mechanical irritants, we hope the day is not far distant when this useful class of our fellow-townsmen will be taught the advantages to health, to comfort, and to happiness, which must arise from working only in rooms where means are provided to prevent the inhalation of particles so destructive of life. We propose not, however, to discuss this disease in the present paper: enough has been written in the above outline of the pathology of tubercle, we would hope, to convince our younger medical friends (and we are quite certain the great majority of the senior members of the profession will join in the opinion we are about to express, and the truth of which we hope to prove ere this article is concluded) that we must look rather for arresting the fatal inroads of consumption on the population of this country, to the prevention of the development of the disease in youth, than to the exhibition of cod-liver oil, or any supposed specific, when the tuberculous cachexia is fully confirmed. The absolute necessity of attending to the earliest symptoms of this peculiar taint cannot too generally be presented to the mind of the patient, for most fully are we satisfied that to no disease is the old aphorism, "*prevention is better than cure*," more peculiarly appropriate than *thoracic consumption*.

Sheffield, March 1830.

[To be continued.]

* These tables are calculated on the examination of an immense number of bodies.

† Andral's Anat. Path., Townsend and West's translation.

‡ Med. Chir. Trans. Edin. vol. i.

MEDICAL GAZETTE.

FRIDAY, MARCH 22, 1850.

We insert, in another part of this journal,* a letter which we have recently received, respecting the admission of members of the College of Surgeons to the fellowship without examination. This letter shows how difficult it is to construct rules, commencing from a particular date, which shall not produce injustice, either real or apparent, in some quarter. The remarks to which our correspondent refers, respecting the limitation of the fellowship by rotation to those members whose diplomas were dated antecedently to the issuing of the charter in September 1843, were not intended to apply to cases like his own; but we fear that, if the concession which he wishes, were made by the College, the effect would be to abolish the fellowship by examination altogether. It appears that Mr. Gruggen became a member in May 1844, *i. e.* about six months after the issuing of the charter, and two months before the publication of the bye-laws relating to the examination of candidates for the fellowship. According to his view, the date of the bye-laws should be taken as the limit for the admission of unexamined fellows: and, therefore, all those who commenced their studies before these laws were issued, should be admitted in rotation. We entertain no doubt, however, that many who commenced their studies after the bye-laws were issued, would be able to make out a strong case for *their* admission in rotation, and would have no difficulty in proving the injustice of conceding a privilege to one member merely because he happened to

commence his studies a few months earlier than another. In short, they who are excepted by the rule will not fail to find some ground of complaint; and the only remedy would therefore be the universal admission of members to the fellowship without examination. The *fellows* would, under such circumstances, be merely *members* under another name. The title would convey no honourable distinction: it would mark merely a member of twenty years' standing. In taking the date of the charter as the limit, according to the original view of the National Association, we have an official, well-defined, and intelligible boundary. Like an act of Parliament, fixed to come into force on a certain day, the arbitrary assumption of the date may unjustly affect a certain number of persons who had commenced undertakings in an old and apparently fixed state of the law; but the general good must prevail over private wrong. By thus taking as the limit membership before the date of the charter, some injustice may be done; but we believe that, on examination, this will be found to be less than that which would arise from the adoption of any other scheme. There are probably no two sections of the profession who would agree about the date. The old members would be satisfied with the date of the charter; members who, like our correspondent, were then students, would take as a standard not membership, but the commencement of studies after the date of the bye-laws (July 11, 1844). They who are now members, and who would be excluded by this rule, would require as an equitable limit the date of the issuing of the proposed supplementary charter. Members *in esse* are always apt to overlook members *in posse*; and we should, therefore, have another class of complainants in gentlemen who had commenced their studies before the date of the supple-

* See page 522.

mentary charter. Again, if a new code of bye-laws happened to follow this charter, then there would arise a fresh ground of complaint from those whose studies were commenced and settled in due order before the new laws were issued. In fact, the examination of the case satisfies us that there is only one of these courses for the College of Surgeons to take with respect to the admission or exclusion of unexamined fellows:—1. To do nothing. 2. To admit, on certain terms, men who were members prior to the date of the charter. 3. To admit, after a certain number of years' membership, all who are or who may become members at a future time. Each plan will doubtless find its advocates. For our own part, we are inclined to hold by the *mezzo termine* which was first selected by the National Association in March 1845—namely, the restriction of this privilege to membership before the date of the charter.

WE extract the following from the reports of the proceedings in the House of Commons on Thursday the 14th instant:—

“ Mr. Spooner presented a petition signed by almost every medical man in Birmingham, complaining of the conduct of the Midland Railway Company in refusing to pay for surgical attendance in a case of accident to a labouring man upon that line, in which amputation of the leg was performed by Mr. Sands Cox. The judges of the Court of Exchequer had given their decision that the Railway company were not liable, and that a nonsuit must be entered. The petitioners prayed for such an amendment of the law as to give medical practitioners a claim for remuneration when called upon to attend to cases of railway accidents *on the summons of the company's servants*. He had also to present another petition, signed by the mayor and other principal inhabitants of the town of Birmingham, in which the petitioners expressed their apprehensions that great difficulty

would be felt in future in obtaining medical and surgical advice in similar cases of railway accidents. In a recent case so long a time elapsed before medical help arrived that the man died.”

We fear that this proposition refers to one of those evils which cannot be cured by legislation. Mr. Cox's case was one of great hardship; and it has been often remarked that “hard cases make bad law.” To render a Railway company liable for charges incurred upon the order of *any* of their servants, would throw open the door to considerable abuse, since the services of medical practitioners may most unnecessarily be put into requisition by men who know that the payment will not fall on themselves; and this might happen without any imputation upon their honesty. Such a bill would stand no chance of receiving the assent of the Legislature, unless a clause be introduced to prevent the abuses which might otherwise arise; but it appears to us there would be very great difficulty in constructing such a clause. As the law at present stands, the medical man has his remedy against the party injured, who may be a pauper, and the remedy may, therefore, be nil; but the injured person, or, in the event of his death, his near relatives, have their remedy against the Railway company under Lord Campbell's act. In these cases, however, it must be shown that the accident did not arise from the carelessness of the person injured, but through the negligence of the company—a matter which is often very difficult of proof. From Mr. Spooner's proposition it would appear that, however the accident may occur, provided the person giving the order be a company's servant, the company should be held liable for the charges. This is surely asking for more than legislation can reasonably concede. If we have mistaken the proposition of our Birmingham brethren, in whose indig-

nation at the treatment of Mr. Cox by a selfish Railway company we strongly share, we shall be happy to publish an outline of the measure which they intend to propose as a remedy.

We have the satisfaction to state, that henceforth medical officers of the army and navy who have distinguished themselves by their services to their country, will share in the honours which have been hitherto withheld from them. It has been officially announced that the civil Order of the Bath will be conferred on the distinguished medical officers of both services. We do not see why similar honours should not be thrown a little more widely open to the profession at large.

We have received several communications in reference to the case of OZANNE *versus* DE LISLE, tried in the Royal Court of Guernsey on the 9th instant. The case is of some importance to the profession in reference to the law of slander as expounded in the Court of the Channel Islands; but, as there is not room in the present number for a full notice of the circumstances, we shall reserve our remarks upon the case until next week.

ASPHYXIA A CAUSE OF DEATH IN ANGINA PECTORIS.

THE causes of death in angina pectoris act on the lungs, heart, and stomach, separately or combined. Death by the lungs results from asphyxia produced by congestion and effusion. From recorded cases we should judge this to be the most common cause of death in this disease. Similar results have been noted in animals, when the divided ends of the nerves have been so far apart that no nervous transmission could take place. Inattention to this has led many experimenters to wrong conclusions. When life has been prolonged, the lung or lungs have been found atrophied to a considerable extent.—*Dr. Kneeland; in American Journal of Medical Sciences, Jan. 1850.*

Reviews.

Reflections on Organization; or, Suggestions for the Construction of an Organic Atomic Theory. By HENRY FREKE, A.B., M.B., T.C.D., M.R.I.A. 8vo. pp. 80. Dublin: M'Glashan. London: Orr & Co. 1848.

THE author introduces his subject by observations on the "*general and specific attributes*" of matter: by "*general attributes*" meaning "those which may be predicated universally of all matter indiscriminately." As "*specific*," the author denotes distinguishing attributes which constitute distinct species." Of *general attributes* the "most conspicuous are the adaptation to be influenced by those agencies or forces called gravity, caloric, and electricity, with which all are familiar as the causes *generally* of activity or motion in matter; that is, as causes of action in all species of matter in general. For this reason the author designates these agencies *General forces*."

The author then proceeds to trace the mode of operation of these *general forces* throughout inanimate creation, the systems, worlds, and ultimate elements, more especially as exhibited in the phenomena of heat, electricity, and chemistry.

The succeeding portion of Mr. Freke's work enters upon the consideration of the laws which govern animate nature. In this kingdom the author notices an universal principle of antagonism between forces, existing not only in the physical, but also in the moral world.

"And what are these forces? With one we are familiar under the appellation—chemical affinity. To the other, namely, to that great power which during the struggle of vital activity antagonizes with chemical force, we would apply the term *organizing agency*." (p. 22.)

The author next treats of the nature of this "*organizing agency*," the conditions of its activity, and the circumstances under which it governs the combinations of "*organizing atoms*."

By *organizing atoms* the author indicates

"minute indivisible (that is physiologically indivisible) particles, which, though in all probability limited in the number of their species, have constituted, by the operation of the attributes impressed upon them at

their creation, that vast aggregate of distinct forms of organised matter which decorate with living loveliness an animated world. Each mineral atom is simple, that is, composed of but a single species of mineral matter. Each organizing atom is, we conceive, compound; that is, composed of a (it may be inconceivably minute) combination of several distinct species of mineral matter, to which combination, at the atom's creation, was imparted the organizing agency to constitute it an organizing atom." (p. 26.)

"It is in the organic laws, general and specific, which regulate the action of organizing atoms, we recognize the objects of physiological research." (p. 27.)

In this quotation we have the gist of the subsequent observations, wherein the author traces the operation of the *organizing agency on organization* throughout the development of animal and vegetable organisms. His object is to trace in these varieties of animal and vegetable structure, a variety also in the species of organizations, whereby the variety in structure shall be explained.

We cannot further follow our author in his highly ingenious speculations; or his inquiry into the physiological and chemical constitution of the blood. We can only express regret that he should have been induced by any circumstances prematurely to publish his views in their present unfinished condition, or to have abandoned the pursuit of an inquiry, in which, from the specimen we have in the little volume before us, we look for greater clearness and more instruction, should he be induced to resume a line of investigation which he has abandoned too soon; at least, for physiological science, which could not but have been benefitted by the matured knowledge of the author of these "Reflections."

NATURE OF PHTHISIS.

PHTHISIS is a disease of the blood, which, from the long continuance of various debilitating influences, becomes deteriorated, and tubercular matter is separated from it. Hence the importance of nourishing the system well, especially in those predisposed to the disease. Early rising, regular habits, exercise in the open air, a diet consisting chiefly of animal food, the avoidance of sedentary employments and mental anxiety, with free ventilation in unconfined streets, are necessary and desirable, indeed, for all, whether predisposed or not.—*Dr. Halliwell; in American Journal of Medical Sciences*, Jan. 1850.

Proceedings of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, March 12, 1850.

DR. ADDISON, PRESIDENT.

On Fatty Diseases of the Heart. By RICHARD QUAIN, M.D. (Communicated by C. J. B. WILLIAMS, M.D., F.R.S.)

THE author commenced by referring to the circumstance which had directed his attention five years ago to the subject of these diseases, to the want of information which then existed, and to the essays which had since been published. He said there were two forms under which fat occurred as a disease of the heart. In the one form fatty tissue *grew* upon and amongst the fibres, concealing them in some cases to such an extent as to lead to the supposition that the heart's walls were composed of fat. In such cases the fibres may still be found unchanged in structure, when the part is examined with the microscope, but more or less distorted in their course by the pressure of large fat cells amongst them. He referred to the circumstance which seemed to direct the distribution of the fat on the heart, and the parts where it was most abundant. In the second form the muscular fibre became disintegrated and *degenerated* into a granular or molecular fatty matter. In such cases there was not of necessity any fat growth on or about the heart. He traced the progress of this change in the fibre as shown by the microscope, and presented in drawings the appearances described. He showed the effects which the presence of this fatty matter in the place of muscular fibre must have on the physical character of the heart, on its colour, its consistence, &c. He pointed out the circumstances by which these appearances were modified, and also the parts of the heart which were most frequently found to be the seat of disease, as well as the circumstances which guide us in ascertaining its presence.

2dly. The author traced the progress of preceding observations on these diseases.

In the next place, under the head of "Preceding Observations on these Diseases," the author gave a very complete account of the extent of our preceding knowledge on the subject. He followed by successive steps the progress of our information from the period of the oldest authors whose writings bore upon the subject to the age of Harvey, through subse-

quent writers to the present time. He showed that the disease here described as true fatty degeneration of the fibres of the heart had been distinctly recognised, though, like fatty degeneration of the liver, the exact change in the fibre has not been distinctly ascertained. For information on this latter point we are indebted to the researches of Williams, Peacock, Rokitsky, Paget, Ormerod, and others. The author took occasion here to describe the differences of opinion which had existed as to the nature of these softened hearts, and also to contrast the character of fatty degeneration of the heart with the fatty degeneration of voluntary muscles.

3dly. He traced the circumstances under which these diseases occurred. He showed the relation which the *growth* of fat on the heart bore to the presence of its elements in the blood, and to the influence of the age, sex, habits of life, &c., of the individual on this condition.

2. Fatty degeneration he described as a process of decay or true degeneration. He established this conclusion by a series of observations on the microscopical and chemical character of the substance called adipocere, by experiments made by himself and others on the artificial formation of fatty matters in albuminous and fibrinous textures external to the body, and by the identity of the appearances in this artificial and in natural processes. He mentioned a great variety of circumstances under which this change took place in the living body, in which it must have occurred independently of any direct communication with the vascular system. He mentioned the names of several authorities on these points, but more particularly, in reference to their pathological import, those of Williams, Paget, and Rokitsky, and established the inference that, when the vital properties of these higher animal substances were impaired, they yielded to the physical influence by which they were surrounded, and fell into the class of more simple compounds shared by them with plants and minerals. He showed, by reference to Mr. Paget's observations, that the first step in this process was an impairment of the nutrition of the organs, and then he detailed the cases in which this impairment occurred. 1st, the heart participating in a general mal-nutrition of the body; or, 2d, suffering locally by disease of the coronary vessels, or as the effect of endo- and pericarditis. Numerical illustrations of these facts were given. The author then referred to the diseases which were found in association with this condition, they being chiefly degeneration of other organs, bloodvessels, &c.

The most frequent seat of the disease,

the age, the sex, the station in life of the individuals, and various facts in connection with the history of the disease, were also numerically illustrated.

The characters of the so-described soft flabby hearts, and the differences of opinion as to their nature, were discussed, and their relation to fatty degeneration considered.

4. The *effects* of these diseases were described as being those connected with impairment of structure and function, causing derangement of the circulation. It was shown that, of 15 cases of extreme accumulation of fat on the heart, 5 had suffered from giddiness and coma, 8 from syncope, and 9 from short breath. Of the 15, 14 had died suddenly—viz. by syncope, or in an analogous condition, 10; by rupture of the heart, 3; by coma, 1.

In reference to the effects of fatty degeneration on the *structure* and *functions* of the heart, the author showed that it was found in connection with hypertrophy in 39 out of 68 cases. He believed this to be due to hypertrophied hearts suffering from impaired nutrition more readily than other hearts,—not, as Rokitsky supposed, to a disturbance of the balance of the nervous functions. The heart may be found unchanged in size, or decreased. The diminished consistence of the tissue permitted the occurrence of some of the most fatal lesions to which the organ is liable—viz. rupture, which took place in 25 of the 68 recorded cases. In 2 cases the rupture perforated the walls of the heart. In other cases it was incomplete, being confined either to the internal surface, the external surface, or in the substance of the heart. Rupture in the substance gave rise to the appearance called by Cruveilhier cardiac apoplexy. The blood effused in these cases may become encysted, and losing its colour give rise to the appearance of an abscess. Cardiac aneurism may also be formed. Illustrations of these facts were given from the tables of cases. The effects of fatty degeneration on the heart's functions gave rise to coma, and even apoplexy. The power of the right side of the heart being weakened, its cavities became filled, and the circulation thus obstructed. Illustrations from preceding writers on this point were given. The impaired powers of the left side of the heart were on the other hand a frequent cause of faintness or syncope. It was present in 15 cases. This syncope may amount to a mere feeling of faintness, or to so complete an arrest of the vital powers as to cause sudden death. Sudden death occurred in 54 of 68 cases, in 21 of which it was by syncope. *Pain* in the region of the heart, and *breathlessness*, with certain peculiarities in each, were also numerically

illustrated, and the causes on which they depended considered. The synoapal feelings, the pain and the breathlessness, may occur independently of each other, or in combination. They may thus give rise to the phenomena known as *angina pectoris*. It appeared to the author that this condition of the heart afforded in many cases a sufficient explanation of the pathology of this disease; and he expressed his opinion that many of those cases in which no disease existed, in which it was attributed to disease of the coronary arteries, or to fat on the heart, were in all probability examples of this fatty degeneration which had so long been overlooked. He confirmed this opinion by the details of cases in the tables. *Hereditary predisposition and the duration of the disease* were treated of so far as the fact permitted.

5. The symptoms and diagnosis of the disease, more particularly in reference to fatty degeneration, were described. A distinction was drawn between those cases in which the heart participated in the general impairment of the health, and was perhaps equal to the demand made on its functions, and those in which the heart, being impaired by local causes, suffered out of proportion to the system generally. In the latter case the symptoms were very unequivocal. In addition to those phenomena referred to in the preceding section, the pulse almost always gave indication of the condition of the heart. It was recorded in 13 cases as being irregular, in 14 as being weak, in 8 slow. In a few as being full, regular, or quick, in none strong.

The feeling of fatigue, from slight causes, particularly from ascending heights, the breathlessness, &c., all progressive from being so slight as scarcely to attract notice to the most extreme suffering on exertion, were mentioned. An anxious expression of countenance, mental irritability, and copious sweats from trifling causes, were also noticed. The physical signs of the disease—viz. feeble impulse, feeble first sound, extended dulness, perhaps a murmur with the first sound, from disease of the columnæ carnea, or imperfection in the second sound, were also discussed.

6. The treatment which in some cases had been found more successful than might have been supposed, was such as was calculated to improve the condition of the blood. We could not restore lost fibres, but we could render those which remained more effective; we could improve the material to be supplied by the blood, and we could render this fluid a better stimulant. The author referred particularly to the management of the digestive organs, to the use of iron, and the relief of paroxysmal attacks by the use of antispasmodics. Narcotics were not

born, and he referred to examples of their injurious effects, as also to the ill effect of exertion or over exercise. Leeches to the region of the heart, followed by counter-irritation, had, in some instances mentioned, been found very useful in preventing the return of distressing paroxysms of dyspnoea and pain. The author concluded by a quotation from Boerhaave, aptly illustrating the formidable effects of this otherwise inoffensive material, when it occurs in a situation to which it does not belong. He apologized for the length of his communication, which was due to the importance of the subject and its numerous relations. The paper was accompanied by tables, containing the abbreviated histories of 88 cases of these diseases, and by a number of drawings.

At the conclusion of the paper there was much applause. It was much regretted that no time remained for discussing this important paper.

WESTMINSTER MEDICAL SOCIETY.

February 23, 1850.

PROFESSOR MURPHY, PRESIDENT.

The Connection between Gout and Rheumatism, and their differential Diagnosis.

DR. GARROD observed that many physicians consider gout and rheumatism as diseases so closely allied as to be merely varieties of the same; others, as differing essentially from each other; while a third set believe that, although the well-marked attacks of acute gout differ widely from those of acute rheumatism, yet that the two diseases may, as it were, imperceptibly merge into each other; so that, in a given case, it may be impossible to diagnose between them.

Dr. Garrod first pointed out the differential diagnosis. Gout is a disease of advanced age; rheumatism, of youth. Gout is more common among men; rheumatism affects both sexes alike. Gout, at first at least, attacks the plethoric, and those who live high; rheumatism, generally the debilitated from any causes. Gout is frequently hereditary; rheumatism, if at all so, incomparably less so than gout. The exciting causes also differ. Gout is induced by high living, certain indigestible food, or by local injury in those strongly predisposed; cold is the principal exciting cause of rheumatism. The rich are more subject to gout; the poor, to rheumatism. Gout frequently presents premonitory symptoms, affecting the digestive organs, which is not the case in rheumatism. Gout attacks the

small joints; rheumatism, the larger. In gout, one joint, generally, only is affected; in rheumatism, many. In gout of long standing the large joints may be attacked, and also more than one; sometimes, again, in rheumatism, the smaller joints are involved. In both diseases the affection of the joints is accompanied by pain, redness, and swelling; but in gout the pain is generally more severe, and the redness and swelling greater than in rheumatism. In gout we have oedema and subsequent desquamation, which do not occur in rheumatism. The fever in gout is proportioned to the local inflammation; but it greatly exceeds it in rheumatism, and there is frequently profuse sweating, of an acid character. Metastasis rarely occurs in acute gout, and when it does, the brain or stomach suffers, the heart seldom or never; in rheumatism the heart is frequently inflamed, and the secondary affection becomes the most important. Chronic rheumatism is more frequent than chronic gout; the latter is frequently accompanied by the secretion of a milky fluid, which constitutes chalk-stones or tophaceous deposits. Their composition is peculiar, consisting almost entirely of urate of soda, and sometimes of phosphate and carbonate of lime. In the fluid state, the needle-like crystals of the urate of soda can be readily detected under the microscope. They are met with on the joints of the hands and feet, which they distort, and even dislocate; also in and around the sheaths of tendons, and even in the cancellated structure of the heads of the bones.

Colchicum possesses an almost magic power in relieving the pain in gout, but is not attended with such marked benefit in the acute form of rheumatism. There are, however, a class of cases in which, even with the utmost care, the diagnosis cannot always be made. These are called rheumatic gout; and it would seem either that the patient suffered from both diseases at once, or that the two merged into one. Dr. Garrod considers it a matter of great interest to ascertain the true nature of these cases, and to find out whether or not cases of true gout and those of rheumatism may not present similar and almost identical symptoms, and yet in their real nature be quite distinct. In a paper read before the Medico-Chirurgical Society, Dr. Garrod proved the existence of uric acid in the blood; in the healthy fluid traces of it only could be found, but in pure gout it was greatly increased, so that from 1000 grains of serum it could be crystallised and weighed. It could also be procured in the form of urate of soda. This is not the case in acute rheumatism, and in that disease no more uric acid is found than in the healthy fluid. This, then, forms a marked difference be-

tween the two diseases. Uric acid, in Dr. Garrod's experiments, was abundant in the blood in cases presenting symptoms of true gout, deficient in those of well-marked rheumatism. This he used lately as a test of two diseases. A labourer being admitted into the hospital with a complaint in one hand, which had been previously treated as rheumatism, but presenting characters of gout, as Dr. Garrod supposed, he directed a small quantity of blood to be drawn, and discovered uric acid abundantly. The man afterwards said he had had a similar attack in the toes, and that he could at any time bring on an attack by drinking beer freely. The plan for detecting uric acid in the blood detailed in the paper read before the Medico-Chirurgical Society being very difficult, Dr. Garrod recommends the following, as being more simple:—He takes a small quantity of blood, say from half an ounce to an ounce, in a wide tube or small glass, and allows it to remain for some hours, to separate into clot and serum. The serum is then decanted, and from half a drachm to a drachm put on a watch-glass, then acidulated with five minims of acetic acid, and a fibre of hemp from a piece of linen or tow introduced. In about forty-eight hours, when the serum has become solid from evaporation, if uric acid be present, the fibre will be covered with crystals of uric acid in the form of rhombs. An idea of the amount of uric acid present may be obtained from the number of crystals.

That these crystals are uric acid can be proved by adding a little water, when, by care, the fibre can be removed with a small pair of forceps, with the crystals adhering to it. Nitric acid and ammonia will at once determine their nature, by the production of the murexide or purpurate of ammonia. Dr. Garrod then mentioned, as an indication of gout, the presence of chalk deposits in the ear,—a sign he has often observed. Sir C. Scudamore gives the tophaceous deposits as being only ten per cent., but Dr. Garrod has met with them in the ear much more frequently, so much so as in chronic cases to form a valuable sign of diagnosis. He has himself often diagnosed the disease from this mark alone, and found his opinion confirmed afterwards by the discovery of uric acid in the blood. In many chronic cases of gout the condition of the urine will aid the diagnosis; and, when there are tophaceous deposits, the kidneys appear to have lost the power of excreting uric acid, so that the urine is at all times free from lithic deposits. When the chalk-stones are formed very freely, he has often found that not 1-10th of a grain of uric acid was eliminated in the urine in the twenty-four hours. At the same time, the urine may present an acid reaction.

PATHOLOGICAL SOCIETY OF
LONDON.

DR. LATHAM, PRESIDENT.

Feb. 18, 1850.

Mr. PARTRIDGE exhibited a

Portion of a spine in which tubercular deposit appeared embedded in the bodies of the vertebrae, accompanied with lumbar abscesses, and associated with tubercles in the lungs.

The patient died in King's College Hospital. In early manhood he had symptoms of phthisis, which continued for some years, and permanently reduced the standard of his general health. Three years before his death, he suddenly strained his back; this was followed by great pain and weakness in the spine, so that he was unable for some time to sit up or even to rest upon the back, and the muscular power of the lower limbs was diminished. He partially recovered, and during the last two years he could walk about, but was not able to follow any laborious occupation. When he entered the hospital, in January 1850, he had a gentle curvature of the spine, unattended with pain, about the lower dorsal region, and a large abscess on the left side of lumbar vertebrae, pointing on the outer side of the erector spinae. This abscess had been forming during four months: it was opened, and gave exit to healthy pus.

There was a firm but not prominent swelling in the left iliac fossa, painful when pressed, and apparently containing a little fluid: it could not be felt below Poupart's ligament.

The brother of this man had died of consumption.

A post-mortem examination showed old adhesions between the surfaces of the pleurae on both sides; old cavities containing tubercular matter in the upper part of the left lung, and scattered tubercular deposits in both lungs. The bronchial membrane was inflamed.

Old (chronic) psoas abscesses existed on both sides, their cavities lined with a firm organised membrane, and containing a small quantity of pus: the abscess on the left side extended as low as the insertion of the muscle. The lumbar abscess did not appear to be connected with the spine, but with tubercular deposit at its side behind the left pleura costalis. The bodies of the lower dorsal and upper lumbar vertebrae presented cavities opening on their surface, and containing more or less tubercular matter. These deposits affected at least five vertebrae, and extended underneath the

anterior common vertebral ligament, and laterally beneath the adjacent pleura costalis: one of the psoas abscesses seemed to have been connected with this portion of the spine. The tubercular deposits were shown by a section of the vertebral column to have extended deeply into the cancellated tissue of three of the bones, so that they had yielded to pressure, and given way in front, producing the gentle curve which had been observed during life.

The left kidney was atrophied, the right being twice its natural size; the left supra-renal capsule was twice its ordinary dimensions; the right was natural.

Mr. Partridge produced the spine, and mentioned the particulars of this case to show the connexion, not unfrequent, between tubercular disease in the lung, and tubercular deposits on and in the cancellated structure of the bodies of the vertebrae, sometimes producing psoas abscess, and sometimes, when extensive, so breaking up the bodies of vertebrae as to produce curvature of the spine: generally, a gentle and gradual curve, owing to the tubercular deposits occurring in parts of several vertebrae, commonly in four or five of them. Mr. Partridge produced other preparations in illustration of the connexion between phthisis and tubercular disease in the spine, and also preparations to show the difference between this disease and the ordinary strumous caries of the vertebral column.

March 4, 1850.

Mr. NATHANIEL WARD exhibited a specimen of

Rupture of the Ileum.

A carman, *et.* 32, was admitted into the London Hospital, under Mr. Adams, in the evening of March 2, a loaded omnibus having passed over his abdomen and chest half an hour previously. He was collapsed, extremities cold, pulse extremely feeble. He complained of great pain, and a sense of fulness about the stomach. No marks of contusion were observed on the abdomen, but in the right lumbar region there was an effusion of blood the size of a hen's egg. Reaction came on in about two hours, accompanied with intense abdominal pain; the slightest pressure could be tolerated. A large dose of opium was administered. Three hours subsequently, the countenance became pinched and anxious; the pulse very rapid and fluttering; violent flying pains all over the body; great difficulty of breathing; and occasional vomiting of dark coffee-ground looking fluid. These symptoms continued for about two hours, when he passed about a quart of dark-coloured urine, but no blood: on the fol-

lowing morning vomited a pint of stercoraceous matter. The vomiting gradually increased in frequency, the abdomen becoming more tense and tender, and he died 24 hours after the accident.

On the post-mortem examination were observed marks of contusion over the abdomen and back. About eight ounces of bloody fluid were in the left pleural cavity, and there was a comminuted fracture of the 11th rib. A quantity of flatus escaped on opening the abdomen, and in the peritoneal cavity were three pints of dark fluid blood, between the folds of the intestines, and mixed up with a few flakes of lymph. A longitudinal rent was found in the ileum, about one and a half inches long, and occupying its long axis, and from this rent the large quantity of blood had escaped. The contents of the intestine had not passed into the abdominal cavity.

Mr. WARD exhibited, at the request of Mr. Luke,

A specimen of Stricture of the lower part of the Colon.

A man, æt. 50, was admitted into the London Hospital, Feb. 16. He was pale and anxious; the skin and tongue were moist; the pulse, though rapid, not hard. The abdomen was tense and tympanitic, particularly in the situation of the transverse colon. He had considerable pain on pressure, not more marked in one part than another. The left iliac region appeared slightly more distended than the right. On examining the inguinal canals, both cords could be distinctly felt, perfectly isolated from any hernial sac; but the left canal was obviously more dilated than the right. He had constant eructations and attempts at vomiting, accompanied with a twisting and racking pain about the umbilicus. He had been the subject of hernia on the left side twenty years ago, but the protrusion did not return after the use of a truss for a few weeks. From that time he had enjoyed uninterrupted health (his bowels at times, however, acting only once in two or three days), till thirteen days before admission, when he felt sick, and loathed his food, with a sensation of uneasiness about the abdomen. His bowels had not been open for 24 hours. Tenderness of the abdomen supervened on the third day; pain across the umbilicus, and vomiting, on the fourth. On the 5th, whilst vomiting, he suddenly felt a descent of what he imagined to be his rupture, which became tense and as big as the fist, and much more tender to the touch than any part of the abdomen. The protrusion returned after he had applied a warm flannel, and kneaded it with his hands, having been down about three or four hours. The symptoms gra-

dually became worse; vomiting was frequent and violent, and the constipation entirely unrelieved. The treatment that had been adopted consisted in the first instance of the exhibition of purgatives and injections (by a long tube which was passed ten inches up the rectum), leeching the abdomen, &c. &c. The comparative largeness of the left inguinal canal, the complete isolation of the cord from connexion with any hernial sac, and the positive assertion of the patient as to the descent of a hernia, and its subsequent reduction, without any relief to symptoms, taken together with the slight fulness in the left iliac region, led to the conclusion that this might be a case of reduction "en masse." Mr. Luke consequently made an exploratory operation, by laying open the inguinal canal, and opening the abdomen at the upper and outer part of the inner ring. No hernial protrusion could be detected, and the small intestine which made its appearance at the opening was not distended, nor did it appear much inflamed. The index finger was inserted into the cavity, and no tumor was found, nor any other cause of obstruction.

He expired on the fourth day after the operation. Copious injections, frequently repeated, and calomel and opium, failed to relieve the symptoms, to which was superadded violent tenesmus, occurring at irregular intervals.

Post-mortem examination.—The large and small intestines were found much congested on those parts which were not in contact with each other, and all were distended to more than twice their ordinary size with feces and flatus; the rectum was collapsed, and empty, and about twelve inches from the external sphincter was a stricture through which only an ordinary-sized probe could be passed. Its upper orifice was surrounded by flaccid mucous membrane, in a state of ecchymosis, and the submucous tissue infiltrated with serum. The muscular tunic of the gut above the stricture, for the extent of five or six inches, was hypertrophied to about three times its ordinary thickness.

Mr. POLLOCK wished to know whether in Mr. Ward's experience he had witnessed a case in which this operation had been attended with any benefit. Mr. Ward replied that he had not, but that he felt sure every surgeon would be justified in having recourse to the same operation under circumstances similar to the case just mentioned. The President remarked that he should be glad to hear the opinions of the members of the Society, in what cases and under what circumstances a surgeon should have recourse to this formidable operation. In his experience he had met with cases of obstinate constipation and stercoraceous

vomiting, and other symptoms of internal intestinal obstruction, in which ultimately the patients recovered without operation.

Mr. PRESCOTT HEWETT thought that the principle laid down by Mr. Ward was a good and sound one. He did not wish, on the present occasion, to discuss the question of operating in cases of internal strangulation; but whenever there were symptoms of obstruction in the bowels, with a history of hernia, the tumor still being in the groin, or reduction *en masse* having occurred, it was right, he thought, to make an exploring operation similar to that performed by Mr. Luke in the case which had just been brought before the Society. A somewhat similar case had some time ago fallen under Mr. Hewett's observation. A person who for several years had been in the habit of wearing a truss for a hernia in the right groin, was seized with urgent symptoms of obstruction in the bowels. The tumor in the groin having been laid bare, was found to be simply an enlarged gland: there was no hernia in this region. The symptoms went on increasing; peritonitis supervened; and at the post-mortem examination a stricture was discovered in the sigmoid flexure of the colon.

Mr. SHAW remarked that, had it been ascertained during life that the obstruction of the bowels was caused by stricture so low down in the colon as described, the proper operation would be that of Amussat—viz. exposing the sigmoid flexure in the left lumbar region, and making an opening in it behind the peritoneal covering. In reference to those cases of obstruction from internal causes, and where the surgeon has been induced to operate on tumors supposed to be herniary, he had lately a case of that kind. A woman had had no motion for four days, although active purgatives had been administered. The surgeon in attendance was assured that she had no hernia. On the fourth day, as tormina and vomiting supervened, he examined her groin, and discovered a tumor on the right side, in the exact situation of femoral hernia, about the size of a walnut, tense, elastic, and moveable. The patient made no complaint of pain in the tumor, even when the taxis had been continued for some time. The tumor was exposed, and a puncture made into it: several drachms of clear serum escaped, and the walls collapsed. The sac was laid open, but nothing was found within it. The tumor was easily detached and removed. No opening was found in the situation of the femoral ring. Mr. Shaw was satisfied that the tumor was an encysted one. Among other remedies, a flexible tube, two feet in length, was passed on several occasions,

and large quantities of water injected, but the fluid returned without feculent matter. The patient survived six days longer, suffering from continued stercoraceous vomiting and great distension of the abdomen. She died ten days after the symptom of constipation commenced. A post-mortem examination was not permitted.

Mr. AVERY said he was glad a discussion on this operation had arisen. It was a matter of the highest moment; and he thought he had observed on several occasions that something like blame had been attached to those who had opened the abdomen for the relief of internal obstructions. As he believed he was at that moment the only person present who had done so, he could not help saying that it was only after a careful consideration of Mr. Phillips's admirable paper, of M. Amussat's work, and of cases from various other sources, that he had determined to make the attempt, if a case should present itself where the fatal termination from obstruction appeared inevitable. He could with a perfect conscience say this attempt to avoid such inevitable end was most tempting. In his own case, and, he believed, in those of others, the patients sunk from the shock in consequence of the exhausted condition to which they were reduced before the operation. Unfortunately success could scarcely follow, on account of the delay which always took place before any one dared to operate.

Mr. GAY mentioned a case which came under his care, illustrating the difficulty of determining the time and circumstances under which this operation would be justified. A man, after lifting some heavy timber, had severe pain in the right side of the lower part of the abdomen: the bowels acted the next day once: but the pain became paroxysmal, and very severe; vomiting followed, and complete constipation; on the third day the vomiting was stercoraceous. The abdomen was not tense; pressure gave pain in the region of the cæcum and commencement of the colon. The treatment was by leeches, calomel and opium, injections, &c. A week after the first symptoms, O'Byrne's tube was passed up the bowel some eighteen inches, and some thin gruel injected. He appeared now to become much exhausted: he lost all pain, and seemed to be sinking. The next day he was improved, fecal matter passed from the bowels, and ultimately the man recovered.

Observing the mortality that follows exploratory operations for internal strangulation, Mr. Gay thought that in no case ought the operation to be adopted without great caution. The case that fell under his notice showed that sometimes the most

severe cases of intestinal obstruction yielded to minor remedies after the period which had been set down as that beyond which it was unreasonable to delay an operation.

Several other members addressed the Society upon the same points, and the discussion occupied a very large portion of the evening.

Mr. COULSON exhibited a specimen of

Diseased Knee-joint,

from a man about sixty years of age, of a gouty and rheumatic habit, and who had suffered for a long time from the disease. The limb was wasted and shortened, foot inverted, and the joint slightly bent, with little power of motion. On examination, the patella was found resting on a surface above the outer condyle of the femur, its articular cartilage nearly destroyed, and covered with a white deposit. The corresponding surface of the femur was in the same condition, and where the chalky deposit was absent there were slender vascular adhesions. The cartilage of the articulating surface of the outer condyle was in a great degree removed, and its place supplied with vascular granulations. The cartilage of the inner condyle was entirely destroyed, and its surface covered with a chalky deposit; and in front of the condyle, and growing from it, there was a rim of bone extremely vascular and covered with white deposit. The head of the tibia was twisted outwards and backwards, its external articular surface excavated, denuded of its cartilage, and covered with a pulpy substance. The external semilunar cartilage was entire, but more vascular and soft than natural. Just below this part of the tibia anteriorly there was a round projection of bone. The inner articulating surface of the tibia was deprived of its cartilage, and covered with vascular growths; the inner semilunar cartilage was destroyed. The head of the fibula was firmly ankylosed to the tibia, and expanded apparently to aid in supporting the outer condyle.

Dr. BRINTON presented a drawing showing the

Displacement of some Viscera of the Belly.

The subject of this unusual situation of some of these viscera was a woman, brought for dissection at King's College. She had died of old age, at 87 years.

The pylorus was placed about two inches to the left of the middle line. The empty stomach lay vertically in the left hypochondrium, immediately fronting the anterior border of the spleen. The liver was somewhat enlarged, and its two lobes were of nearly equal size. There was scarcely any ascending colon, properly so called, for the cecum, bending at its upper part, gave

place to a colon which passed athwart the belly, about two inches below the navel, to the left lumbar region. In the latter part of its course it gradually ascended, and thus ran closely, side by side, with the descending colon, but in the reverse direction.

The right kidney was much below its natural situation: half of it lay in the iliac fossa, and its hollow border looked equally upwards and inwards.

The stomach, when full, must have swung round into the epigastric region.

The nature of the displacement is doubtful. The deformity may be generally supposed as a deficiency of viscera from the middle of the belly, or from the upper parts of the umbilical and right lumbar regions.

As it occurred in a female, and exactly occupied the seat of the deformity procured by tight lacing, this may be suspected as its cause,—a conjecture somewhat strengthened by the narrowness of the lower part of the chest.

Most of the congenital deviations noticed are more extensive; while the artificial constrictions have been chiefly observed by their effects on the chest and the liver. Hence it is difficult to say to which of these two causes the limited displacement of the present case is to be referred.

Mr. POLLOCK exhibited (for Dr. R. Bieth, R.N.) a specimen of

Fracture of the Neck of the Femur, impacted into the Trochanter, and followed by bony union.

A sailor, *et.* 85, slipped down while walking, and struck his left hip. From the symptoms attending the injury, he was supposed to have fractured the neck of the thigh-bone. He survived the accident two years. The accident occurred February 2, 1848; he died February 11, 1850. He had recovered with a very useful limb, which was about an inch shorter than natural.

A section of the bone points out most clearly the nature of the fracture; corroborates the opinion first formed that the neck of the bone had been fractured (though no crepitus could have been detected); and explains how bony union may occur in such cases. Anteriorly, the head of the bone is seen on a line about half an inch lower than the upper margin of the trochanter major; and the head and neck are at right angles with the shaft of the bone, the neck much shortened. Immediately internal to the anterior inter-trochanteric line there is a deep sulcus between it and the anterior surface of the neck. Posteriorly, the lower margin of the articular surface of the head almost rests on the upper surface of the

lesser trochanter, and the neck is shorter in proportion than in front. Externally, the trochanter major appears expanded. The section of the bone shows that the line of fracture occurred at the junction of the neck with the trochanter or shaft of the bone. The broken extremity of the neck is thrust into the cancellous structure of the trochanter major to within half an inch of its external wall, and is thus embedded in and surrounded by bone. Bony union has occurred at several points around it, and the head and neck are thus firmly united to the shaft.

LIVERPOOL MEDICAL AND PATHOLOGICAL SOCIETY.

Feb. 21st, 1850.

Adjourned Discussion on the use of Cod-Liver Oil in Phthisis. DR. TURNBULL.

THE three points which I conceive to be the most important, are—1st, the proofs of the spontaneous recovery from phthisis ascertained by pathological investigations; 2d, the proofs of the curability of the disease derived from stethoscopic examination of living individuals, and from observation of the symptoms; and 3d, facts in regard to the efficacy of cod-liver oil in the treatment of consumption.

With respect to the first point, the proofs derived from pathological investigations are already so complete that they do not stand in need of additional evidence, and show clearly that tubercular matter is capable of absorption or transformation in all its stages. The proofs of recovery in living individuals are also quite sufficient to establish this point; but we can never have too much evidence on this head, and it is most desirable that we should know more of the favourable circumstances which conduce to spontaneous recovery.

It is very desirable that any gentleman who has had an opportunity of observing cases of spontaneous recovery, or facts bearing upon the conditions which favour it, should give the Society the benefit of his experience. Dr. Lancaster mentioned to me an interesting case, showing the beneficial effect of change of climate, which I hope he will detail to the Society; and as the good effect of climate has been called in question very frequently, more especially of late, I may observe that about a year and a half ago I was consulted by a medical student, who had all the general symptoms of phthisis,—well-marked pains in the chest, cough, emaciation, hæmoptysis, and night sweats, and who completely recovered by taking a voyage to America. I will also

read a well-marked and advanced case of recovery from residence at Malta, given by Dr. Leeper, in his report on tubercle, in the 4th vol. of the Dublin Quarterly Journal of the Medical Sciences.

It was observed last evening that the number of medical authorities to which I referred was at variance with the remark I made, that the curability of consumption had scarcely received the attention it deserved from medical men. I still think that my observation was just. It was intended to apply to the higher class of medical observers; for the subject has received no lack of attention from an inferior class. Most of the authorities were pathological investigators, and many of them French; and I believe that until very recently (if not even now) the great body of the profession have looked upon this disease as hopelessly incurable; and hence the treatment has been almost exclusively palliative. Sir J. Clark, in his standard work, after quoting largely from Dr. Carswell's pathological proofs, has stated that he did not attach much importance to them, further than that they afforded encouragement to persevere in our endeavours to correct the tuberculous diathesis. I am far, however, from agreeing with Sir J. Clark on this point, for there are few subjects of more importance than the pathological proofs of the curability of phthisis, and the conditions which favour spontaneous recovery are deserving of the deepest research. Phthisis being a chronic disease, and having no well-marked beginning or termination, except when fatal, is difficult to investigate, but a perfect knowledge of a disease so frequent is important.

In the Edinburgh Monthly Journal I find a review of a work by Dr. Beoffrey, which I have not succeeded in obtaining. From the review I learn that it contains an account of fifteen cases of recovery from phthisis, and that it gives an analysis of the circumstances under which recovery took place, as follows:—1st, change of locality; 2d, an artificial atmosphere; 3d, sedative and calmative treatment; 4th, an equal temperature; 5th, mercurials; 6th, antiscrofulous treatment; 7th, a treatment directed against certain diseases of the skin (*treatment antidartreux*); 8th, antagonistic diseases; 9th, puncture of breast; and 10th, good alimentation, and causing individuals to grow fat. The review does not speak very highly of the work; but I feel sure that such a mode of collecting cases of recovery, and of analysing the circumstances under which it occurred, is calculated to lead to useful results, and that medical men should record every isolated but well observed case of recovery. With respect to the third point, the efficacy of

cod liver oil, I might give several additional cases; but, as I am anxious rather to hear the experience of others, I will only bring before the Society two cases, which they will have an opportunity of examining.

CASE I.—A young man, *æt.* 21, with cough, emaciation, night sweats, pain in the right shoulder and clavicle, and hæmoptysis. He had also well-marked dulness on percussion, increased resonance of the voice, prolonged expiration, and some mucous rale. He improved speedily under the use of the oil, and rubbed in iodide of mercury ointment below the clavicle. He is now entirely free from cough and all other symptoms of the disease, and is stout and healthy in appearance. The sound on percussion has become clearer, though it is still less resonant than natural; and respiration is perfectly free from any rale.

CASE II.—A man, 37 years of age, with hæmoptysis, and pain in the right side of the chest. He speedily got better, but returned in a few weeks, having had several very violent attacks of hæmoptysis. He was then much emaciated, and expectorated large quantities of purulent matter slightly fetid. The right side was less resonant generally, but more especially behind, about the lower angle of the scapula. Subcrepitant and mucous rales were heard very generally over the right side of the chest, and at the level of the lower angle of the scapula, but more laterally cavernous respiration and rale became very evident. He had persistent pain in this situation, for which powerful counter-irritation was used. The patient became very weak: he had hectic fever, night sweats, frequent hæmoptysis, very abundant purulent and rather fetid expectoration. The prognosis became very unfavourable, more especially as his stomach rejected the oil for a long time. It was therefore laid aside several times, and other medicines given instead of it. About the middle of December it appeared to be of some use; and from that time he improved. He is now stout; he has very little cough, and the signs of a cavity can no longer be discovered; the rales have disappeared from every part of the lung, and respiration is only somewhat bronchial. The sound on percussion is also less clear than on the healthy side, though in this respect also there is great improvement.

Dr. LANCASTER related a case of consumption in a gentleman who was landed in an apparently hopeless state in one of the West India islands. He recovered, and two years ago he was alive, and residing in Italy.

Dr. RAMSAY made some observations on the effects of change of climate, and said

he had sometimes seen very good effects from change to a tropical climate in the early stage, but that when it had advanced as far as the second stage, the disease always advanced more rapidly in the tropics. He thought the Society indebted to Dr. Turnbull for bringing the results of his observations at the infirmary before the Society. He had seen one of the patients, who had been introduced, in the infirmary some time ago, and the change he now presented was very great: at that time he was much emaciated, and had severe cough, but now he was very stout, and seemed to have very little cough. The other patient was so much improved that he did not recollect him, though the patient himself recollected having been examined by him.

Mr. BANNER thought that there was difficulty in forming an opinion as to the curability of phthisis, from our not knowing what were really cases of phthisis and what were not. He had seen a case which he and Dr. Brandreth pronounced phthisis, and yet Sir J. Clarke and another London physician said it was not; and the patient got well at Clifton. In another case, a lady from America, he thought there was only dyspepsia, and yet two physicians in London said it was phthisis, and recommended her to go to Madeira. She remained during the winter in Liverpool, and went over to America, where she has got well.

Dr. SANDIE had considerable experience in the use of cod-liver oil, which, to a certain extent, corroborated Dr. Turnbull's, and had used it in his own family.

Dr. NOTTINGHAM thought that if the symptoms and diagnosis were written down by one medical man, and the post-mortem appearances by another, it would be found the diagnosis was erroneous in one-half the cases. He thought much of the improvement in the cases of phthisis might be owing to the comforts and diet of the infirmary. He wished to know what was meant by the disease being arrested, and whether it was possible for a remedy to do part of the case, and yet not to be capable of doing the whole.

Mr. BANNER and other members had seen great benefit in cases of scrofula from the oil.

Dr. TURNBULL observed, in reply to what had been said by Mr. Banner and Dr. Nottingham, in reference to the diagnosis of consumption, that he wished it to be clearly understood how far the diagnosis was certain or uncertain. He was very far from agreeing with Dr. Nottingham that the diagnosis was uncertain in one-half of the cases. It was true that in an early stage the physical signs might not enable

them to make a certain diagnosis. It was easy, however, to separate those where it could not be clearly made out, from those in which there was no doubt about the nature of the case. In the second and third stages he thought there was no disease where we used the stethoscope in which the diagnosis was more easy or certain. He had pointed out, however, in his paper, that this uncertainty in the diagnosis in the early stage causes us to lose cases which we ought to possess, showing the curability of the disease, and that we had proof of this in the cretaceous concretions and cicatrices found after death. Might not the case mentioned by Mr. Banner, where the lady got well and went back to America, be a case proving the curability of the disease, instead of erroneous diagnosis? He did not doubt that much of the improvement in the cases of phthisis he treated in the Infirmary might be due to comforts and diet. The power of cod-liver oil in healing scrofulous diseases externally he thought a strong argument in favour of its efficacy in consumption. It was used largely by all the surgeons in the Infirmary; and in one case, where it had been resolved, on consultation, to amputate the arm, and cod-liver oil was prescribed to improve the health, it acted so favourably that the necessity for operating had been obviated. He thought Dr. Nottingham's question, whether a remedy could arrest or partially cure a disease without being able to do the whole cure, was one deserving of attention.

Sir A. KNIGHT said he had seen an instance in his own family where the good effects of the oil could not be attributed to diet or additional comforts.

Mr. BANNER had seen cases of hæmoptysis where the diagnosis was difficult, and he thought it often a difficult matter to distinguish between chronic bronchitis and phthisis.

Mr. HIGGINSON inquired if the oil should be given during hæmoptysis, and mentioned a case in connexion with the question.

Dr. TURNBULL said that, whenever acute febrile symptoms were present, the oil should be laid aside for a time. The two symptoms which he had found to interfere with or contra-indicate the oil most frequently were hæmoptysis and diarrhoea, and when these were severe, it might be necessary to omit it for a time.

Sir A. KNIGHT was surprised that the oil was now so seldom used in chronic rheumatism, for which it was formerly often prescribed with great benefit. He had also seen it of marked benefit in a case of apparently simple though extreme emaciation. The patient recovered his flesh, and soon became quite plump.

ACADEMY OF MEDICINE, PARIS.

March 5, 1860.

PRESIDENT, M. DE BRIQUETEAU.

AFTER the reading of the official correspondence, MM. Becquerel and Rodier presented an essay on the diminution of the proportion of albumen in the blood, and on the dropsy which is the consequence thereof.

Compulsory Feeding of the Insane.

M. CARRIERE presented, in the name of M. Billod, an apparatus contrived for the easy administration of nourishment to insane patients who refuse food.

Application of the Forceps in Face Presentations.

M. DANTAU read a memoir on a particular mode of applying the forceps in face presentations; whereby, when the chin is directed backwards, it is brought forwards under the pubic arch, the forceps having their concave border in the opposite to the usual direction.

Medical Nomenclature.

M. PIORRY introduced his doctrines by a few historical and general observations on preceding systems of nomenclature, and submitted the following propositions:—

The soul is the starting point of organisation: it is under its influence that the phenomena of the vital principle, properties, forces, &c. are produced.

The soul, vital principle, &c. cannot be diseased: the organs alone are susceptible of disease.

Therapeutic agents may influence the organs, but moral influences alone can affect the soul.

There can be no functional derangement without organic lesion. The organic lesion, with its cause and its effects, constitutes the sole complex idea of a disease. These collectively should be regarded as constituting an element or unity, which is called a pathological or monorganic state.

The symptomatic collections, called diseases, are entirely arbitrary, and vary with the opinions of individual physicians.

In practice it is not the particular groups of symptoms called diseases which are to be studied, but the pathological state. This should be represented, not by hypothetical ideas, but by just and correct expressions.

Nomenclature, or *onomism*, is therefore the result of organo-pathology.

M. BOUCHUT objected that M. Piorry had not first proved the existence of the great principle to which he referred.

Ovarian Cyst.

M. DEPAUL, in the name of M. Jobert,

of Lamballe, presented an ovarian cyst which contained hair, teeth, and flat and long bones. The tumor had been removed by excision during life. The patient had perfectly recovered.

ACADEMY OF SCIENCES, PARIS.

Annual Meeting.—March 4, 1850.

PRESIDENT, M. POUILLLET.

SUBJECTS PROPOSED FOR PRIZES.

1. *Physical Science—to be adjudged in 1853.*

The laws of the distribution of fossils in sedimentary strata: the questions of their successive or simultaneous appearance and disappearance, and their relation to the preceding conditions of the animal kingdom, to be also discussed.

2. *Proposed in 1847—to be adjudged in the present Year.*

The phenomena of the development of the embryo in *vertebrata*, *mollusca*, and *articulata*.

3. *Experimental Physiology: founded by M. Moulouy—to be adjudged at the next meeting of the Academy;*

to the author of that work which shall be considered to have contributed in the greatest degree to the advance of experimental physiology.

4. *The Cuvier Prize;*

To be adjudged for the best work on the animal kingdom, or on geology, that has appeared since Cuvier's death.

PRIZES ADJUDGED FOR THE YEARS 1846, 1847, AND 1848.

PHYSICAL SCIENCES.

On the movements of the *sporidia* of algae, and of the *sporules* of cryptogamous plants.

The first prize was awarded to M. Thuret, and the second to MM. Derbès and Solier.

EXPERIMENTAL PHYSIOLOGY.

Prize for 1846.

The Commission made honourable mention of the treatise, by M. Sappey, on the Organs of Respiration in Birds; and of that of M. Coste, for his work on the Instinct manifested by "*Eptmoches*" in the construction of their Nests; but the adjudication of the prize is deferred.

The Prize for the year 1848, was adjudged to M. Bernard, for his work on the Physiology of the Pancreas.

The Prize for 1847

has not been awarded. The Commission spoke in terms of commendation of the treatise of M. Brown-Sequard on the Functions of the Nervous System.

MEDICINE AND SURGERY.

For the year 1846,

The following awards were made:—

To M. Lebert, for his clinical and microscopical researches on inflammation, tuberculation, and tumors, eighteen hundred francs.

To M. Bousset, for a work on Pellagra, fifteen hundred francs.

To M. Pravaz, for his essay on Congenital Luxations of the Femur, fifteen hundred francs.

To M. Roger, for his essay on the temperature of infants, in their physiological and pathological conditions, twelve hundred francs.

To M. Bourguignon, for his treatise on Scabies, twelve hundred francs.

For the years 1847 and 1848.

Prizes of two thousand five hundred francs each were awarded to MM. Jackson and Morton for their discovery and application of anesthetics.

To M. Porta, for a treatise on the pathological changes which arteries undergo after ligature and torsion, a prize of two thousand francs was adjudged.

To MM. Bibra and Gheist, for an essay on the evils attending manufactures in which phosphorus is employed, a prize of one thousand francs.

To M. Mandl, for a work on Microscopical Anatomy, a prize of one thousand francs.

To MM. Becquerel and Rodier, for their researches on the composition of the blood in health and disease, a prize of one thousand francs.

To M. Landouzy, for a treatise on Hysteria, one thousand francs.

To M. Larroque, for a work on Typhoid Fever, one thousand francs.

The following works were also recommended to the Academy as deserving some reward:—

On the Plague and Quarantine, by M. Bourdon; on the Origin of Yellow Fever, by M. Adouard; on the Diseases of Workmen exposed to Cupreous and Arsenical Emanations, by MM. Blandel, de Lowry, and Chevallier; and on the History of Medicine, by M. Renouard.

THE MANNI PRIZE.

This prize, of the value of fifteen hundred francs, has been awarded to M. Bouchut, for his essay on the Signs of Death.

BIOLOGICAL SOCIETY OF PARIS.

Monthly Summary.—December 1849.

PRESIDENT, M. RAYER.

ANATOMY.

On the Development of the Anatomical Elements in General, and of the Adipose Cells in particular. By M. CH. ROBIN.

The first part of this communication exhibits, in a synoptical table, the relations which exist between the most simple anatomical elements, and show that the lowest form of those cells, which may be termed *animal*, present the highest degree of vegetative activity, as seen in the metamorphoses of the elementary cells of the various animal tissues.

Fat cells, M. Robin observes, do not undergo a metamorphosis; they do not assume the vesicular form until their last form of development. They commence by the aggregation of minute globules of oil, which are subsequently enclosed in a membrane. Their cell formation takes place long after the disappearance of embryonic cells.

On the special arrangement of the Muscular Fibres in the Cecum of the Rabbit and Hare. By M. BROWN-SEQUARD.

These are disposed—1, spirally between the layers of mucous membrane forming the valve; 2, longitudinally; and 3, circularly, or transversely, separating the longitudinal from the spiral layer.

In the appendix there are very few muscular fibres, and those longitudinally directed.

PHYSIOLOGY.

On the Discharge of Uterine Mucus at the Menstrual Periods. By M. FOLLIN.

M. Follin read a case on this subject, and reserved further observations for a special memoir.

Theory of Hæmaturia. By M. VERNEUIL.

M. Verneuil proposed to investigate how far the production of sugar in the liver, as discovered by M. Bernard, is concerned in causing the red colour of the blood. The action of sugar on venous blood is similar to that of oxygen and certain salts. The division of the pneumogastric nerve, which proves fatal by the injury inflicted on the lungs, also abolishes the function of secreting sugar by the liver.

Transmission of Sensitive Impressions by the Spinal Marrow. By M. BROWN-SEQUARD.

The author related the experiments by

which he had determined that section of one lateral half of the spinal cord does not cause permanent loss of sensibility in the posterior limb of the same side. A temporary diminution of sensibility occurs in the posterior extremity of the same side, but after an interval of from three to five minutes the sensibility becomes notably augmented, while the sensibility of the opposite extremity totally disappears. The spinal cord seems thus to possess a cross action; this is further shown by the subsequent division of the other segment of the spinal marrow, at a short distance from the previous incision, when the sensibility of both limbs is lost.

M. Brown-Sequard observes that these experiments afford proof that the transmission of sensitive impressions is not confined to the posterior lateral columns.

On the Coagulability of the Blood in Batrachians during the Winter. By M. BROWN-SEQUARD.

The author stated that from his experiments on the heart of frogs, he had found wounds, or removal of a portion of that organ, speedily repaired by the rapid coagulability of the blood; contrary to the general opinion of physiologists, to the effect that the coagulability of the blood diminishes with the decrease of temperature.

On the Influence of the Nervous System, of Galvanism, of Rest, and of Action, on the Nutrition of Muscles. By M. BROWN-SEQUARD.

The following are the author's conclusions:—

1st. That paralysed muscles will not lose their contractility, nor become atrophied, if daily submitted to the action of galvanism.

2d. That by galvanism the contractility and nutrition of muscles may be restored to their normal condition, although entirely deprived of nervous influence.

3d. That it would be important in many cases of hemiplegia and other forms of paralysis, to subject the muscles to frequent galvanization, not merely with reference to the cause of the paralysis, but that they may be in a condition to obey the motor stimulus when it shall be re-established.

PATHOLOGICAL INVESTIGATIONS.

Abnormal Arteries.

M. VERNEUIL presented an example of irregular distribution of the renal arteries. The right artery was threefold—a superior, a median, and an inferior branch, each distributed respectively to the nearest portions of the organ. A vein accompanied each artery. On the left side the artery was normal.

Abnormal Conformation of the Heart.

M. CL. BERNARD exhibited a heart in which the right auriculo-ventricular orifice was directed inwards, towards the pulmonary artery, from which it was separated by a portion of the tricuspid valve. Both sides of the heart were hypertrophied. The individual had manifested no symptoms of disease of the heart during life.

Case of Cyclocephalus in a Fatal Pig.

The anatomy of this monster was detailed at great length by MM. CHAUSSAT and DAVAINE.

Dissecting Aneurism of the Aorta.

M. FOLLIN exhibited a specimen of this form of disease. The aneurism had been ruptured within the pericardium.

Tuberculous Tumors in a Rabbit.

M. FOLLIN showed the scapula of a rabbit, to which were attached four tubercular tumors, of the size of eggs. No tubercle existed in any internal organ.

Tumor observed on a Salmon.

M. MAYOR, of Geneva, submitted a tumor developed between the integuments and the muscles on the back of a salmon, which he considered to have resulted from a wound. The tumor was of a tegumentary character.

Destruction of the Pancreas during Life.

M. CL. BERNARD related the case of a dog in which he had established a pancreatic fistula, and which had died with extreme emaciation. M. Bernard supposed that the bile, passing by the communication which he had opened with the duodenum, had mingled with the pancreatic juice, and effected digestion of that organ, which he found had entirely disappeared.

On the Diseases of Animals in their savage state.

M. RAYER exhibited the organs of a wild rabbit in which tubercular and inflammatory disease existed. M. Rayer referred to the histories of several epizootics.

On the Artificial Production of Dropsy in Animals.

M. LEBERT made some observations on the production of dropsy by the injection of water into the circulation of animals.

ORGANIC CHEMISTRY.

On the Presence of Hippuric Acid in the Blood.

MM. VERDEIL and DOLLFUS stated that in the course of their researches they have detected hippuric acid in the blood of an ox, a substance which has hitherto been detected only in the urine of herbivora and man.

Hospital and Infirmary Reports.

FELLOWS' PRIZE REPORTS

OF

CASES OCCURRING IN UNIVERSITY
COLLEGE HOSPITAL,

SUMMER SESSION 1845.

By C. H. F. ROUTH, M.D. Lond.

Three cases of Rheumatism, with Pericarditis and Endocarditis. The remarks on the three are given conjointly.

CASE I.—Charles Pithers, æt. 29, admitted under Dr. Thomson, April 20th, 1845.

Case.—*Rheumatismus Acutus—Pericarditis (13th)—Endocarditis (26th).*

The following particulars were obtained from the patient:—

Of standard stature, spare conformation, melancholic temperament; complexion dark. By occupation a coachman for several years without interruption. Single; somewhat intemperate in his habits, drinking from Oij. to Oijj. of porter daily, though occasionally as much as Ovj. or Ovij.; sometimes taking spirits, and occasionally being tipsy. He has always had sufficient food, though he is very irregular as to the hour he takes his meals; not always warmly clad; sleeps well in health. He resides at 91, Praed Street, Edgeware Road, which is a dry and open situation, but his room was much exposed to draughts. He has resided here for the last three months. In London all his life, except occasionally when accompanying his master into the country; has not, however, left London for the last two years.

Hereditary predisposition.—His father died at 64, of an apoplectic attack accompanied with paralysis. He had been liable all his life to "rushing of blood to the head." He had had gravel, but never rheumatism. His mother died at 54, of dropsy: she was not liable to rheumatism. All the other members of his family are healthy, except one sister, who had rheumatic fever at 18, and a second attack at 20.

Habitual state of health.—He has been generally healthy, and though of spare conformation, moderately strong. He has not been liable to coughs. Never had scarlet fever or small-pox. Never had rheumatism before. Twelve years ago he had "an inflammation of the stomach," with pain at the epigastrium, for which leeches were applied.

Has had gonorrhoea twice in his life. The last time was about twelve years ago.

Present attack.—On the 8th April he was called up suddenly at night to see his father, who was supposed to be dying. He had been ailing, indeed, the day before, with slight pains across his shoulders, but nothing more. On the night in question he was sweating very profusely when he got up, and in his hurry only put on his loose great coat over him, without any under coat. It appears, however, he had frequently done so before with impunity. The night was very cold and chilly. His father died that night, and he sat up the remainder of the night with the body, and took two glasses of brandy. While so sitting up, the pain across the right shoulder became very severe, extending to the muscles of the arms and loins, to such a degree that he could not hold himself up, but was obliged to walk in a half bent position. On the Monday morning he took some sweet spirits of nitre, which somewhat relieved his pains, but he continued to feel very uncomfortable and thirsty, much nauseated, and actually vomited, but there were no rigors or general pains. He went home that night, but could not sleep by reason of the pain. On the Tuesday morning he had medical advice. There was no redness or swelling at the time in any of his joints. These symptoms did not make their appearance till Thursday (10th), when his left thumb began to swell, and became red. The swelling and redness soon extended to the wrist. A day or two after the other wrist became inflamed, and he now observed that when the inflammation in one wrist went down, the other began to swell, and vice versa. This occurred about a week from the date of the first attack (13th). The ankles then also began to swell, but did not alternate in this respect with the state of the wrist. It was about the same time that he first observed he could not take a *long breath without pains at the epigastrium*, and a catch at the heart between the fifth and sixth ribs. He became also slightly delirious at this time: but this symptom did not last more than two or three hours. From this time the cardiac pain diminished, and has lessened ever since. In other respects he has continued much in the same state, the pain in the extremities being sometimes better, sometimes worse. About three days ago he observed the right arm was more painful and swollen. There have been no rigors since the first attack. He has kept his room ever since, but only occasionally his bed.

Present state.—No rigors. He is sweating profusely, the smell from the perspiration being intensely sour. Colour of skin

natural. Does not feel weak and tired, but is very restless. There is no eruption about the body, and no very perceptible emaciation. He cannot lie on his right side by reason of the pain in right arm, nor on his left, as it makes his breath short. Prefers to lie on his back. There is no redness in any of his joints, but the right arm is much swollen from the wrist up to the elbow, and pits on pressure, nor is it tender. There is no tenderness in the shoulder, though he cannot move the joints without great pain. The right knee is slightly swelled, the left ankle also, and the oedema extends a slight way up the foot. There is much less power in the right than in the left arm.

The intellect is clear. There is no headache or giddiness. Expression of countenance natural. Lips and cheeks natural. Organs of senses unaffected. He complains of pains in the muscles of the lumbar region, especially on pressure and motion.

Thoracic organs.—The respirations are regular, 28 in a minute. There is some pain between the fifth and sixth ribs on a deep inspiration. There is no expectoration. There is some dulness under both clavicles, especially the right, but not to any very great extent. The vesicular breath sound is very feeble on the right side superiorly, both in front and behind, the expiration being in both parts proportionally too loud.

Heart.—There is occasionally some dull pain about the heart, but it is chiefly referred to the epigastrium and right hypochondrium; but even that is so slight that unless his attention were called to it he would not remark it. There are occasional palpitations. The cardiac dulness reaches as high as between the third and fourth ribs, and to about four inches lower down. The dulness extends transversely three inches, beginning at the middle line of the sternum. There is a loud to-and-fro double friction sound heard all over the cardiac region, but indistinctly at the apex and base. It is not heard in the neck nor in the left side behind. It is heard slightly in the right supra-spinous fossa. The first and second sounds, so far as can be heard, are healthy. A slight tremor is perceptible to the hand when held over the cardiac region. Pulse 104, full, and resisting.

Tongue clean and moist. No sore-throat or difficulty of deglutition. The appetite is excellent. Some thirst; no nausea or vomiting. Some slight tenderness in the epigastrium, and just below the left lower ribs. The abdomen does not appear enlarged. Liver reaches about one finger's breadth below the margin of percussion yields a completely as high as the fifth, incomplete

the fourth rib on the right side. Bowels open.

The urine is dark, with a copious precipitate of lithates; very acid; sp. gr. 1032. No albumen or excess of urea.

Supposed exciting cause.—He attributes the present attack to a chill taken on the night of the 6th. About three months since he lived with a prostitute, with whom he indulged in immoderate sexual intercourse, being thereby much weakened; but for three weeks prior to the present attack he had deserted her.

Treatment.—21st, 10 A.M., V. S. brachio ad 3rvj. β Hydrarg. Chloridi Antim. Tart.; Pulv. Opil, aa. gr. j. fiat pil. 3ta. q. q. h. s. Low diet. β Liquoris Potassæ, $\mathfrak{m}\mathfrak{x}$ v.; Vin. Sem. Colchici, $\mathfrak{m}\mathfrak{x}$; Mist. Camph. $\mathfrak{z}$ j. 6ta. q. q. h. s.

21st, 2 P.M.—The blood drawn was in no way buffed, but it contained a good deal of crassamentum. He has been much easier ever since the bleeding. There is less pain in the limbs generally. Pulse small, 92. The first two doses of his medicine made him very sick, but he has not been so since. Cardiac symptoms not improved. Pergat. Admouvant. Hirudines x. regioni cordis.

23d.—There is still some slight external tenderness between the ribs on the left side over the cardiac region, as also in the epigastrium and left hypochondrium, to which the pain is chiefly referred. The intercostal spaces are less visible on the left than on the right side. Cardiac dulness not increased. The "fremissement cataire" and double friction sound persist. The legs continue rather painful and swollen. The right arm is much less swelled. There is no headache or giddiness. Pulse 96, regular, pretty full. Bowels freely opened.

23d.—The right arm is much more moveable and less swollen. The shoulders are less painful, and the swelling in the knees is quite gone down, but the ankles to-day are red, painful, and swollen, very hot to the feet. Temperature, right, 96° F. Left foot, 96°. He is sweating profusely, and the sweats have an intensely sour odour. No alteration in the cardiac symptoms. Bowels open. Tongue clean; gums not sore.

24th.—The external tenderness about the cardiac region remains, as also the catch on a deep inspiration: the latter, however, is less marked. There is no increase in the cardiac dulness transversely, which still extends two and three quarters to three inches externally, beginning at the left middle line of sternum. Extends longitudinally as high as the third rib, as low as the hypochondrium, but he had just been eating a hearty breakfast. On marking the limits of the transverse dulness, it was found by Dr. Quain that by making the patient lie on his right side, the cardiac dulness reached

to full one and a half inches to the right border of the sternum, and about one and three quarters to the left of the same line. The dulness was also found to move one and a half inches more to the left side, by making him lie on that side. The friction sound was less audible. Pulse 82, full. Bowels not open to-day. Calomel, gr. v. fiat pil. stat. sumend. Haust. purgans niger hora post pil. sumend. Pt. in usu misturæ.

25th.—The friction sound is scarcely heard at the base; the first being much the louder of the two. It is heard but feebly at the apex. The amount of dulness longitudinally is increased, reaching to behind the third rib; but it is not altered in a transverse direction. The dulness on percussion of the right back, especially superiorly, is greater than on the left side, except in the lower part, where there is scarcely any difference in the dulness of both sides. The respiration superiorly on the right side is weak, but the expiration proportionally too loud. Pulse 82. The ankles are much less painful and swollen. The arm more moveable. Bowels not open.— β Ol Ricini, $\mathfrak{z}$ ss.; Acacia Pulv. $\mathfrak{z}$ j.; Tr. Jalapæ, $\mathfrak{z}$ j.; Aq. Menth. Pip. $\mathfrak{z}$ j. fiat haust. stat. s.

26th.—The dulness measures the same longitudinally as before. It has somewhat increased transversely, measuring full three and a quarter inches. There is no fremitus felt over the cardiac region. The double friction sound is not heard. Towards the afternoon, however, a faint systolic murmur was heard at the base, slightly at the top of the sternum, and in the carotid. He complains, however, of no pain at the heart. There is still a slight catch in the breath on a deep inspiration. Bowels open.—Pt. in usu pil. Zino Opil. Pt. in usu Mist. April 21 (addendo) Liquoris Potassæ; Vin. Sim. Col. aa. $\mathfrak{m}\mathfrak{v}$. sing. dos.

April 23th.—The dulness over the cardiac region is diminished both transversely and longitudinally. It does not extend higher than between the third and fourth ribs superiorly, and between the fifth and sixth anteriorly. The dulness begins transversely, about one finger's breadth to the left of the middle border of the sternum. The seat of dulness changes as before with the change of position. The catch in the breath persists; but he feels it most to-day between the third and fourth ribs on the right side on a deep inspiration. There is no murmur or friction sound to be heard, but the first sound is prolonged. This prolongation is also heard at the top of the sternum. His gums are somewhat spongy, but there is no mercurial fetor. Altogether he feels easy and comfortable.

30th.—He continues to be free from

pain in the limbs. The catch in the breath has disappeared. The gums are very sore, and the mercurial taster is present. He says he cannot sleep at night, from feeling, as he expresses it, "choked with phlegm" when he lies down. His throat is very sore, with a slight ulcer on the uvula. The submaxillary glands are swollen, and feel harder; and it is with difficulty he can open his mouth. Pulse 126, soft and compressible. Cardiac symptoms much the same. The cardiac dulness longitudinally reaches only as high as fourth rib.

May 1st.—He complains chiefly of weakness; and, excepting the sore-throat, has no pain whatever about him. He can open his mouth better. Pulse 108, full. The first sound of the heart is quite healthy. No friction sound heard.

2d.—The improvement continues. Gums very sore.—Omitte Medicamenta.

3d.—He is getting much better. The throat continues, however, sore, but less so than before. His appetite is very good.

He does not perspire at night. Bowels freely opened.—R. Vin. Semini Colch. ℥ij.; Decoct. Cinchon. Flava. ℥ij. ter die sumend. Full diet.

6th.—The patient continues to improve. He is free from pain, and gaining strength. Appetite good. The cardiac dulness reaches from the fourth to the sixth rib longitudinally. Transversely, from the left border of the sternum two and a half inches externally. The sounds are perfectly healthy. The impulse is only a little stronger than natural. No fremitus catenae. Pulse 104, soft. The right infraclavicular space is a trifle duller than left. The respiration about natural on both sides. The difference is more marked on and above the clavicle, where the expiration on the right side is too loud. The dulness is, however, more marked over the right supra-spinoous fossa, where the expiration is almost bronchial. The liver does not reach below the margin of the ribs.

8th.—Discharged cured.

CHARLES PIERRE.—State of Urine.

Date.	Lithates.	Reaction.	Quantity passed in 24 hours.	Sp. gr.	Quantity of solid matter excreted in 24 hours.	Diet.
April 20	Copious precipitate.	Very acid.	—	1032	—	Low.
" 21	Do. pink.	Do.	—	1030-15	—	"
" 22	Do.	Do.	—	1035	—	"
" 23	Do. but no longer pink.	Do.	—	1035	—	"
" 24	Do.	Do.	—	1034	—	"
" 25	Do.	Do.	3 12	1021-25	—	"
" 26	Do.	Do.	12	1036	357 gr.	"
" 28	Do.	Do.	16	1021-27	—	"
" 29	Do.	Do.	24	1019-21	—	"
" 30	Do.	Do.	—	—	—	"
May 1	None.	Slightly acid.	8 saved.	1019	—	"
" 2	None.	Do.	24	1016	486	"
" 3	Copious precipitate.	Very acid.	16	—	—	Fall.
" 5	Do. †	Acid.	29	1021-26	—	"
" 6	None.	Acid.	48	1023	1286	"

On April 30, May 1 and 3, excess of urea, as indicated by the common test. Albumen was never found. The micro-

scopical characters never exhibited anything of interest: simply lithates, epithelium scales, and occasionally hairs.

[To be continued.]

BEAN IN THE TRACHEA.
DR. S. PARKMAN gave the particulars of a case to which he was called after death. A child, of eleven months, was supposed to have swallowed a bean on a Saturday; had several fits of dyspnoea, in none of which, however, was it seen by its physician, who uniformly found it free from pulmonary symptoms. On Monday, in an access, it

ceased to breathe. The trachea being opened after death, a bean, swollen to double its size, was extracted. In view of the great swelling of vegetable bodies, Dr. Parkman thought a patient should not be left without watching, as the vegetable body is constantly swelling, and each access of dyspnoea will be more severe than the last.—*American Journal of Med. Sciences*,

Correspondence.

THE CHARTER OF 1843.—THE FELLOWSHIP QUESTION.

SIR,—It is with much surprise that I read in the leading article of the last number of the *GAZETTE*, that those members of the College of Surgeons whose diplomas were dated antecedently to the issuing of the charter in 1843, alone were injured by it, and that the writer cannot see on what equitable principle others who were not members of the College when that charter was issued, but have become so since, can complain of its provisions, or consider that they were treated with injustice, when it was a bye-law of the College at the date of their Membership that they could attain the Fellowship only by examination.

Now I contend that many have been, and are, much injured, though their diplomas were not dated before the charter was granted; and, as my case is one of many, I will state how I am situated.

When the College obtained their charter I had nearly completed my studies, and, having always aimed at obtaining as full a knowledge of my profession as possible, I had embraced every opportunity of acquiring it which Guy's Hospital held out to its students. I became a member of the College, and a licentiate of the Apothecaries' Company, in May 1844, and was almost immediately afterwards elected house-surgeon of a provincial hospital having more than eighty beds. I believe it was not until the month of July, 1844, (two months after I had become a member of the College) that the bye-laws relating to the Fellowship were made known to the profession; and I then found that, according to the strict letter of the law, I was virtually excluded. In 1847 I applied to the Council to allow me to present myself for examination, as I wanted only the additional hospital practice which they required, hoping that, under the circumstances of the case, they would consider the longer practice at a smaller hospital equivalent to it; but I received a letter from the secretary to say that I could not be admitted until I had been eight years a member. Not feeling inclined to wait four years longer before commencing practice, I gave up the idea of becoming a Fellow, and have for two years been engaged in private practice, and it is, of course, quite impossible for me now to leave it; whereas, when I applied to the Council for admission, I should gladly have given up the required time for dissections and preparation for examination.

When I commenced my studies I followed the course which would enable me to attain to the highest point in the profession, and had the fellowship been then in existence I should never have been satisfied with less; but it was not until some years after, when it was impossible for me to commence again.

Now, sir, I would ask on what reasonable ground can I be excluded from becoming a fellow, if the member who passed six months before I did is to become one simply by rotation? Why am I always to remain in a lower position? If the fellowship remain to be attained by examination only, I am injured most undoubtedly by it, inasmuch as great advantages are given to my juniors which I could not have; but if it is to be granted by rotation to all six months my seniors as members, I am much more deeply injured.

The only fair plan, in my opinion, for the Council to adopt, is to do as they have done before, that is, to make the new bye-laws affect only those who shall commence their studies after the date which they bear; and therefore place all those who had commenced their studies prior to the granting of the charter on the same footing as those who were members prior to it; for it was, of course, impossible for them to shape their studies according to laws which had no existence, and consequently unjust that those laws, when made, should affect them.

I am, sir,

Your obedient servant,
H. MARCH GRUGGEN.

Chichester, March 14, 1850.

Medical Intelligence.

CONVENTION OF POOR-LAW MEDICAL OFFICERS—SUPERANNUATION FUND BILL.

THE bill drawn for a proposed fund for poor-law officers having made no provision for the medical officers, surprise and dissatisfaction have been expressed by many, more especially by those who have devoted a great part of their years to toilsome, ill-requited attendance on the poor. This feeling grew stronger from the fact that the clerks of unions were embraced in the operation of the bill,—a class of gentlemen eminently awake to monetary interests, yet, like the medical officers, devoting only a part of their time to the obligations of the poor-law appointments.

A meeting to consider the subject was held by advertisement at Mr. Bainbridge's, St. Martin's Lane, on the 18th ult. On

that occasion Mr. Bainbridge stated that he had examined a draft of the bill which had been drawn out by the Poor-law Board, an abstract of which he submitted to the meeting. "Medical men (he said) were excluded from participating in the advantages of the bill, the objection being that they were elected annually and had private practice; but these were not valid objections." After some discussion on the clauses, a committee was appointed, consisting of Mr. Bainbridge, Mr. Leonard, Mr. White, Mr. Evans, Mr. Hutchinson, and Mr. Hooper, to wait on the Convention of Poor-law Medical Officers, and make arrangements, if they thought it desirable, for a public meeting on the subject.

On the 28th ult. the Committee of the Convention had the pleasure of receiving the deputation as proposed. Mr. Bainbridge ably urged the leading points of the question, setting forth, in addition to the other hardships of the medical officers, the slight and grievance of their being excluded from the benefits of the fund; since in no other way could officers of a certain standing get so good an annuity as even by paying up arrears, and thus qualifying for the advantages of the fund. The want of permanency of office was admitted to be in some instances a difficulty, but not an insuperable objection; and it was proposed to meet it by a clause whereby an officer on removal or resignation might retain a part of the advantages which would have arisen to him from the fund on the maturity of his service. Mr. Bainbridge finally requested the co-operation of the Committee, to the end that the medical officers might also be included in the provision of the proposed measure; and suggested for consideration whether a deputation to the Poor-law Board, or convening a general meeting of the Union surgeons, would be most desirable.

Dr. Hodgkin, the Chairman, stated the result of the interview which the Committee had recently had with the Poor-law Board, and that the subject had then been pointedly brought under notice by Mr. Ross, who had suggested to the Commissioners that the provisions of the Superannuation Fund might be rendered available to the medical officers at their discretion or choice. Mr. Nicholls, the Commissioner, answered that such a view had suggested itself to the Board, and he promised that consideration should be given to the subject. Dr. Hodgkin dwelt upon the importance of the Deputation co-operating with the Convention in their endeavours to obtain a mitigation of the general grievances complained of by the Poor-law medical officers. It was argued against compulso-

rily joining the Fund, that, so long as guardians could dismiss at their pleasure the medical officer, his having contributed to the fund would prove another fetter on his independence; that many professional men attached to Unions would object to a forced deduction of salary, though only at the rate of two and a half per cent., for the purposes of the fund; that in some Unions the election of officers was by *rotation*; in others, at least, annual; and many surgeons held such small sections of Unions which produced a salary too insignificant for annuity purposes.

Much important conversation ensued, in which the Deputation took an active part. Attention was specially drawn to the question of a transfer of "medical relief" from the Poor-law Board to the General Board of Health, in favour of which the Committee had received many letters from the country. It was noticed that, should this change take place, a special superannuation fund might be formed and permanence of office secured, in the Act which would authorise the said change of administration, and probably blend the duties of Union surgeon and officer for sanitary purposes.

The Deputation having expressed confidence in the proceedings of the Committee, in their advocacy of the interests of the medical officers, it was resolved that the further consideration of the subject be deferred to the following week, and that the Deputation be requested to again attend on the occasion.

At the adjourned meeting of the Committee which took place on Thursday last, it was resolved—

"1st. That, owing to the want of *permanency* in the appointments of the majority of the Poor-law medical officers, and the small amount, in many instances, of their salaries, it is the opinion of this Committee that it will not promote the interests of the Union surgeons to be compelled to subscribe to the superannuation fund; but they consider that the Bill should include a permission for any Union surgeon to join the said fund, should he think fit."

"2d. That, so soon as a Bill on the subject is actually before Parliament, the Committee will call a general meeting relative thereto, should the provisions alluded to in the foregoing resolution not be embodied in the said Bill."

Mr. Bainbridge and the gentlemen forming the Deputation, being introduced pursuant to the invitation given at the last meeting, were informed of the above resolutions, which were considered by them well calculated to further their immediate object for the general good of the Union surgeons, and expressed their satisfaction at the ready co-operation given by the Committee, and

at the unanimity resulting from the interview.

CHARLES F. J. LORD,
Hon. Sec.

4, Hanover Square,
March 11, 1888.

THE NATIONAL MEDICAL ANNUITY AND RELIEF FUND SOCIETY.

THIS Society was originally founded by Edward Daniell, Esq., under the name of the "*General Medical Annuity or Relief Fund Society*," and was for some years conducted by him at Newport Pagnel. Finding the original plan defective in some of its parts, and experiencing much difficulty in working it in the country, Mr. Daniell, at a public meeting of the subscribers, called in London for the purpose (on the 26th November, 1849), resigned the direction of the Society, with the view of having it placed on a firmer and more scientific basis. At this meeting the name of the Society was altered, and a Provisional Committee appointed, to re-establish it on the plan that should, after full consideration, seem most eligible; a Committee of Management being at the same time named to carry the wishes of the Provisional Committee into effect.

The Managing Committee, after much deliberation, and after consultation with a most competent actuary, have agreed upon a general plan, which appears to them calculated to fulfil, in a perfectly safe and effective manner, all the objects contemplated in the foundation of the Society.

The following is a brief outline of this plan:—

The Society is divided into two parts—a Provident Branch, and a Benevolent or Relief Branch.

The object of the Provident Branch is to afford to members every facility for providing for themselves and families, by means of provident savings, sure resources against the infirmities of advanced age, and those evils arising from the contingencies of ill health, shortened life, or loss of fortune, which beset the path of all professional men.

The main object of the Benevolent Branch is to administer relief in cases where the provisions made through the medium of the Provident Branch have failed, through inability, to be fully carried out; or, if carried out, have proved inadequate to meet the necessities of particular cases; but it will also extend relief, under peculiar circumstances, to the widows and orphans of members who have not been subscribers for annuities.

I. *The provident branch.*—The medium through which the provident branch purposes to carry out its objects is the granting

of annuities to members, under all or any of the following heads:—

1. Annuities (varying from £10 to £100) payable on the contingency of professional incapacity from ill health, &c., and to commence immediately on the occurrence of such incapacity.

2. Deferred annuities, of like amount, to commence at any specified age, from fifty to seventy; with the additional provision that, should the subscriber become incapacitated before the stipulated age, he shall be entitled to a proportionate annuity to commence at the period of incapacity.

3. Annuities to widows, on the principle of survivorship; that is, to commence immediately on the death of the subscriber: one-half of the annuity to be deducted in the case of the widow's marriage.

4. Annuities to children individually, on the same principle of survivorship; the respective annuities to cease entirely on the marriage of the females, or on the coming of age of the males.

5. Family annuities, to be granted to the whole children of a family conjointly, on the same principle of survivorship, and with similar limitations.

II. *The relief fund.*—It is intended to form this fund out of the annual and life-subscriptions of members, and from donations, bequests, and all the other means whereby charitable institutions are usually supported. Among the many objects contemplated by this branch of the Society, the following have been particularly considered by the managing committee:—

1. To grant advances to such of the subscribers for annuities as may be unable, from sickness or other causes, to pay their premiums when due.

2. To make donations to members who may be disabled by disease, or otherwise in reduced circumstances.

3. To grant relief, under similar circumstances, in special cases, to the widows and orphans of members.

4. To augment, by annual grants, the annuities of widows or orphans, when, from particular circumstances, they are found inadequate.

5. To grant loans to members of a certain standing, at low rates of interest, or even without interest, under special circumstances.

6. To grant sums for building, or assisting to build, or otherwise providing cottages, retreats, or other residences, for decayed members or their widows.*

It is proposed that it shall be a fundamental principle of the Society, that its benefits shall be restricted to members and

* It is not contemplated to carry the last two measures (5 and 6) into effect, until the fund has attained a large amount of capital.

their families: membership to consist in an annual subscription of one guinea, or a life subscription of ten guineas; and subscribers for annuities to be still considered as members, although they may have discontinued their annual subscriptions.

The premiums for annuities will be calculated on the lowest scale consistent with perfect security; but it will be evident, from its peculiar constitution, that this Society, even if its premiums were higher than those of other offices, must possess advantages derivable from its relief branch, which none of these can possess.

The final institution of the Society, with its form of government, mode of management, laws, &c., will be determined at a future meeting, of which due notice will be given.

Committee Room, 52, Regent Street,
January 31, 1850.

**MEMORIAL OF THE MANCHESTER COMMITTEE
ON THE REPLY OF THE COLLEGE OF SUR-
GEONS.**

*To the Right Hon. Sir George Grey, Bart.,
Her Majesty's Principal Secretary of
State for the Home Department.*

SIR,—The Manchester Committee, appointed at a public meeting of the profession to watch the progress of the medical reform question, beg respectfully to represent to you the dissatisfaction which they feel at the late proceeding of the Council of the College of Surgeons of England.

They refer to a communication which has recently been addressed by the Council to the National Institute of Medicine, Surgery, and Midwifery, wherein the intimation is expressed of maintaining a continued opposition to every proposal for such a modification of the constitution of the College as shall admit surgeons in general practice to its governing body.

Upon this subject the Manchester Committee would submit to you that such a determination is directly at variance with the wishes and feelings of the great body of members of the College. They would further urge, that in any modified charter that may be conceded by the Crown, the restoration of harmony between the Council and the members can only be accomplished by the spirit being carried out of certain suggestions which the Manchester Committee submitted to the Council in the month of January last.

The propositions which were submitted to the Council from Manchester comprehended two sets of circumstances, relating in the first place to the Fellowship of the College, and secondly, to the constitution of the Council, and the character of its examinations.

Upon the subject of the Fellowship the Committee would observe, that all members of the College having, prior to the Charter of 1643, enjoyed equal rights and privileges, were dispossessed of the same by the mode in which the provisions of that charter were carried out.

A very small minority were selected from amongst the members arbitrarily, and without any fixed principle, and in the new grade thus constituted, all the powers and influence of the College were made to inhere. The Committee do not attach any value to the Fellowship as now proposed to be conceded to members of twenty years standing, on payment of a fee of ten guineas, seeing that the members elected to that distinction under the provisions of the late charter were called upon to make no such payment. Any admission to the Fellowship upon terms less favourable must continue the distinction which the Committee hold to be both unjust and invidious.

They would submit that if the Council of the College of Surgeons were constituted in part of surgeons engaged in general practice, the education of the great body of the profession might very appropriately be regulated by the College in such a manner as to render any demand for a third college perfectly gratuitous: the Manchester Committee viewing every such proposal with the greatest possible dislike and distrust.

In conclusion, the Committee would urge upon you that in any advice which you may tender to the Crown respecting a new charter to the College of Surgeons, you will defer to the wishes and feelings of the great body of its members, rather than to the representations of the interested, and for the most part self-selected few who constitute its present Council.

Signed, on behalf of the Committee,
W. WATSON BRYER,
Chairman.

Manchester, March 5, 1850.

**MEDICAL STATISTICS. MORTALITY OF THE
SEXES AT DIFFERENT AGES.**

Is an interesting statistical paper, published in the *Lancet* of March 9th. Mr. Edmonde has calculated the mortality per cent. per annum, based upon the returns before and since the act for the registration of deaths. The results are also put in contrast with the Carlisle tables, upon which insurance offices at one time placed great reliance. The differences in these tables are rather remarkable, especially in relation to the mortality of the sexes at different ages, a point of as great importance as age in judging of the relative liability of diseases.

Deaths per cent. per annum of the Population of England and Wales.

AGE.	ENGLAND, 18 Years. 1813—1830.		ENGLAND, 7 Years. 1838—1844.		CARLISLE, 9 Yrs. 1779—1787.
	Males.	Females.	Males.	Females.	Both sexes.
0—5	4.90	4.22	7.07	6.04	8.23
5—10	.66	.61	.93	.90	1.02
10—15	.46	.48	.60	.66	.54
15—20	.66	.70	.70	.79	.64
20—30	.93	.95	.94	.94	.75
30—40	1.05	1.14	1.09	1.13	1.06
40—50	1.37	1.37	1.46	1.32	1.43
50—60	2.14	1.98	2.26	1.98	1.83
60—70	4.15	3.78	4.28	3.79	4.12
70—80	9.28	8.88	9.22	8.42	8.80
80—90	20.82	19.67	20.11	18.32	17.66
Above 90	33.93	34.09	36.53	34.58	28.44
All ages..	1.99	1.90	2.27	2.10	2.60

FEMALE PHYSICIANS—A WORD IN FAVOUR OF THE SEX.

[We extract the following from a letter published in the last number of the Boston Medical Journal. It will be a good subject for agitation in this country when the affair between the College and the Institute has been settled:—]

Women *will be* physicians. The time has come for it, and neither art nor power will prevent it. Woman has never yet been foiled when her heart was set upon a great object. If our eyes are put out, and our hands cut off, we are educating our sons and daughters, and we will teach our daughters to pray for eyes as soon as they can lisp. We do not ask or wish for separate colleges, and there needs no argument to prove that in other sciences separate institutions are not needed: then why should the holiest, purest study taught to man be sexualised?

Our sons and brothers need the restraining, the purifying and elevating influence of woman, when they go from home influences to the corrupting ones of the city. And it may be, that the lecturers themselves would find it salutary to have women present. A professor once said to me that he could not possibly give certain lectures if I were present. This gentleman was in no way remarkable for his delicacy. Of another professor, in the same city, I asked the privilege of attending his lectures. He assured me it was impossible; that such was the state of morals among the students that I would not be safe from insult, and that I would need the police to

protect me. Not being fond of riots or conspicuity, I pressed the matter no further. But I was deeply pained, for in a few months these young men would have their diplomas, and go away to their future work, and lives would be in the trust of those who were too unprincipled to see and treat a lady with civility in the classroom. Two days after, another professor in the same city invited me to attend his lectures, and I accepted his invitation to some of his lectures, and was treated with all deference—not a look or action to offend the most delicately fastidious, if I except the loathsome one of tobacco-chewing. In another college, where I was invited by the president to attend some lectures, I found this last-named practice carried to a very great extent; so much so that I must needs pick my way through the aisle, and when seated, carefully raise my dress from the floor to prevent its utter ruin. The next day I found the silent admonition had taken effect: there was an improvement, and the students themselves expressed disgust at a practice so offensive to a lady.

I think that it is but just in me to remark that, as an individual, I have no complaints against the medical faculty. I have ever been treated by them with a generous courtesy, that has made me feel them my friends. The museums of colleges have been opened to me, private libraries and private instruction in dissection, aid and information freely given, for which in the past I have been deeply grateful, and of which, now in my retired life, I retain a most delightful recollection. I do not, and

never have wished to practise medicine; but others do, and as a woman I enter into their sympathies, and speak earnestly for them.—Yours truly,

PAULINA WRIGHT DAVIS.

Providence, Jan. 1850.

MEDICAL SOCIETY OF LONDON.—ELECTION OF OFFICERS FOR 1850.

At the recent anniversary meeting of this Society, the following gentlemen were elected office-bearers for the year 1850:—

President.—J. R. Bennett, M.D. *Vice-Presidents*.—Dr. Waller; F. Hird, Esq.; Dr. Willshire; and H. Hancock, Esq. *Treasurer*.—N. Clifton, Esq. *Librarian*.—W. A. Harrison, Esq. *Secretaries in Ordinary*.—Drs. Smiles and Cogswell. *Secretary for Foreign Correspondence*.—Dr. Davidson. *Councillors*.—W. F. Barlow, Esq.; W. Harvey, Esq.; E. Headland, Esq.; W. Holding, Esq.; F. Hutchinson, Esq.; W. Middleton, Esq.; G. Pilcher, Esq.; H. R. Roberts, Esq.; Dr. Rowland; S. Stedman, Esq.; Dr. Chowne; W. Dendy, Esq.; Dr. T. Thompson; J. Hilton, Esq.; J. Bishop, Esq.; J. F. Clarke, Esq.; J. Hunt, Esq.; R. L. Hooper, Esq.; A. Fisher, Esq.; Dr. F. Bird.—Orator for 1851, Dr. Waller.

SURGEONS OF EMIGRANT SHIPS.

THE conduct of medical officers appointed to emigrant ships has been recently the subject of severe censure in the House of Lords. On Friday last Earl Grey stated that he had felt it to be his duty to have returns prepared from all the ships which had sailed with emigrants to New South Wales since 1847, and to have an analysis of the conduct of the surgeons. He had the result in his hand. The number of emigrant-ships to Port Philip and South Australia, of which reports had been received, was 124; of the 124 surgeons of those ships, 70 were highly commended; there was no complaint of 28; 4 had a qualified commendation; 6 were described as having been inefficient, 2 of them from ill health; 5 were censured for decided inefficiency and misuse of their authority; and 11 were declared positively bad. He conceived that this was no unsatisfactory result, when it was considered how many surgeons were employed, and often under unforeseen circumstances, at very short notice.

* * That, out of 124 medical officers, 16 should turn out inefficient and badly conducted men is not surprising, when the loose way in which these appointments are made is considered. The salary allotted to the office is insufficient to secure the services of first-class men.

HOSPITAL FOR DISEASES OF THE CHEST.

HER MAJESTY the Queen and his Royal Highness Prince Albert have forwarded the munificent donation of 100 guineas, in aid of the funds for the erection of the intended new Hospital for Diseases of the Chest, at Victoria Park.

SEAMEN'S HOSPITAL SOCIETY.

It appears from the Report of this Society for the year 1849, that during that year no less than 4338 patients have been relieved on board the Society's ships, the *Dreadnought* and *Iphigenia*. Of these, 2239 were in-patients, exclusive of 181 on board at the beginning of the year, and 2099 were out-patients. Of the in-patients, 1475 were discharged cured, 230 were convalescent, 54 had been relieved, 9 not cured, expelled 8, died 241, under treatment 240. A considerable number had been discharged to ships convalescent. Of the out-patients, 84 were completely clothed after their cure, and 25 supplied with shoes and stockings. The income for the year from all sources amounted to £8264. 4s. 6d., and the expenditure, including the purchase of £2300 stock, equalled the receipts. The *Iphigenia* was still retained as an hospital ship, and during the prevalence of the cholera had received 250 cholera cases. Since the foundation of the hospital, 93,310 seamen had received the benefit of medical attendance, and in some cases clothing and employment.

MEDICAL APPOINTMENT.

DR. R. TAYLOR has been appointed Physician to the St. Pancras Royal General Dispensary, and to the Central London Ophthalmic Hospital, Gray's Inn Lane.

PNEUMONIA IN CATTLE.

AN epizootic of contagious pneumonia has appeared among the horned cattle at the Institute, Versailles. A large number of the animals are suffering from this disease. —*L'Union Médicale*. X

ROYAL COLLEGE OF SURGEONS.

THE following gentlemen having undergone the necessary examinations for the diploma were admitted members of the College at the meeting of the Court of Examiners on the 15th inst.:—Messrs. Thomas Watkins Hooper, New Peckham—Henry Anthony, Dungarvon, county of Waterford—Edwin Henry Bolton, Kennington—Joseph Edmund Kooystra Nadin, Manchester—Daniel Rossiter, Frome, Somerset—William Jaynes, Colford, near Frome, Somerset—George Pain, Army—Thomas Henry Pierpoint, Lindfield, near Cuckfield, Sussex—Thomas Roberts, Pwllheli, North Wales—and Thomas James Duthoit, Hoxton Square.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practice, on Thursday, 14th March, 1850:—
Stephen Massett Webb, London—Henry Nuttall, Lyston, Leicestershire.

OBITUARY.

ON Sunday, the 17th inst., at his residence, Bridge Street, Canterbury, Edward Scudsmore, M.D., one of the Physicians to the Kent and Canterbury Hospital.

BOOKS & PERIODICALS RECEIVED
FOR REVIEW

DURING THE LAST TWO WEEKS.

Statistics of Cholera. By Assistant-Surgeon Edward Balfour. Madras, 1849.

Statistical Reports of the Health of the Navy. Part I.

Vital Statistics of the City of Salisbury, with some Comments on the Cholera-Visitation of 1849. By J. Winger, M.R.C.S. &c.

Portraits of Diseases of the Skin. By Erasmus Wilson, F.R.S. Fasc. 6.

Remarks on Epilepsy. By G. King, Esq.

Abstract of the Proceedings of the Obstetric Society of Edinburgh for 1848-9. Session 8.

Pharmacopœia in usum Nosocomii Regii Glasguensis.

Boston Medical and Surgical Journal. March.

Comptes Rendus. Nos. 6, 7, 8, Février 11, 18, 25; No. 9, Mars 4.

Journal de Chimie Médicale. Mars 1850.

El Observador Periodico de Ciencias Medicas, etc. Num. 6. Barcelona, 28 Febrero.

Handbuch der allgemeinen und speziellen Gewebelehre, etc. Von Dr. J. Gerlach.

Casper's Wochenschrift für die gesammte Heilkunde. Nos. 3, 4, 5, 6; 19 Januar—9 Februar.

Henke's Zeitschrift für die Staatsarzneikunde. 1. V. H. 1850.

Oppenheim's Zeitschrift für die gesammte Medicin. Nos. 6, 7, 8, 9.

A Treatise on the Climate and Meteorology of Madeira. By the late Dr. J. A. Mason, and John Driver, Consul at Madeira.

A Second Letter on Christian Baptism to the Hon. B. W. Noel. By Kesphe.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Mar. 18.

BIRTHS.	DEATHS.
Males.... 728	Males.... 500
Females.. 856	Females.. 467
1584	967

CAUSES OF DEATH.

ALL CAUSES	967
SPECIFIED CAUSES	964
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	140
<i>Energetic Diseases, viz.—</i>	
2. Dropsy, Cancer, &c.	43
3. Brain, Spinal Marrow, Nerves, and Senses	126
4. Heart and Bloodvessels	42
5. Lungs and organs of Respiration	182
6. Stomach, Liver, &c.	52
7. Diseases of the Kidneys, &c.	13
8. Childbirth, Diseases of Uterus, &c.	9
9. Rheumatism, Diseases of Bones, Joints, &c.	6
10. Skin.....	2
11. Old Age	43
12. Sudden Deaths.....	29
13. Violence, Privation, Cold, &c....	28

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	8	Convulsions.....	40
Measles.....	12	Bronchitis.....	79
Scarlatina.....	22	Pneumonia.....	82
Whooping-cough.....	43	Phthisis.....	145
Diarrhoea.....	17	Lungs.....	5
Cholera.....	8	Teething.....	15
Typhus.....	27	Stomach.....	3
Dropsy.....	13	Liver.....	9
Hydrocephalus.....	27	Childbirth.....	3
Apoplexy.....	34	Uterus.....	5
Paralysis.....	21		

REMARKS.—The total number of deaths was 24 below the average weekly mortality of the eleventh week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer	30.29
Thermometer.....	46.9
Self-registering do.	Max. 59.0 Min. 16.7
From 12 observations daily.	Sum.

RAIN, in inches, &c.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 2° below the mean of the month.

NOTICES TO CORRESPONDENTS.

Notice.—In order to prevent delay in the insertion, it is particularly requested that all letters enclosing Advertisements be marked on the outside "Advertisement."

The communication of Mr. Boulton will be inserted next week.

The letter of Inquirer, and the reply of Dr. Cumming, will appear in the following number.

Dr. Kirk's contribution on Pericarditis has been received.

Mr. Smith, Belper.—The two papers have come to hand, and will have early insertion. We approve of the plan, and shall be glad to receive the contributions in the order suggested.

Dr. Houth.—All the articles have duly reached us, and will be published with as little delay as possible.

Dr. Snow's communication on Narcotism will appear very shortly.

Mr. E. Meynatt.—No copy of a statement accompanied the letter.

Lectures.

COURSE OF LECTURES
ON
DISEASES OF THE HEART.

Delivered at St. Vincent's Hospital during the
Session 1849-50.

By O'BRYEN BELLINGHAM, M.D.

Fellow of the Royal College of Surgeons in Ire-
land, and one of the Medical Officers of the
Hospital.

LECTURE VII.

*Sounds of the heart—Normal limits and
intensity of the heart's sounds—Mechan-
ism by which the sounds of the heart
are produced—Theories of the cause of
the first sound—Theories of the cause of
the second sound—Theory of the sounds
of the heart most generally received—
Remarks on the foregoing theory.*

Sounds of the heart.—If the ear, either
with or without the stethoscope, is applied
to the præcordial region in a healthy sub-
ject, two sounds are heard, which succeed
each other quickly, but are readily distin-
guished from one another, and are followed
by a pause or interval of repose; after
which the same phenomena are repeated.
If the heart's action is very slow, a short
but distinct interval may be recognised be-
tween these two sounds, and the pause or
interval of repose is longer; if, on the
other hand, the action of the heart is very
quick, the sounds follow one another with
such rapidity that there scarcely appears
to be any interval of repose.

The sound which occurs first in order
after the pause is termed the first sound
of the heart, sometimes the systolic sound;
that which follows it is termed the second
sound, sometimes the diastolic sound. The
first of these sounds, compared with the
second, has a dull character, and its dura-
tion is longer; the second sound is short
and clear, and was compared by Laennec
to the lapping of a dog, or to the falling
back of a valve. The first sound is heard
at the period of the ventricular systole, and
for this reason has been named the systolic
sound: it is synchronous with the impulse
of the heart, and with the pulse. The
second sound occurs at the period of the
ventricular diastole, and for this reason is
sometimes termed the diastolic sound: it
immediately precedes the pause or interval
of repose.

Both these sounds are readily distin-
guished at every part of the præcordial

region: both are well marked at that part
of this region where a dull sound is elicited
by percussion; that is, where the heart
approaches most closely to the parietes of
the chest. Cruveilhier, in his examination
of an infant born with the heart exposed,
ascertained that both sounds increased in
intensity from the apex towards the base of
the heart, and that the maximum intensity
of both sounds was at the same place, and
vice versa: "hence (he observes) it is at
the base of the organ we are to look for
the cause of these sounds." Both sounds
of the heart are usually well marked at the
point where the apex is felt to beat, as well
as over the base of the ventricles. The
first sound is generally considered to have
its greatest intensity on a plane lower than
the second; and M. Pigeaux, from this
circumstance, has proposed the name *in-
ferior* sound for the first, and *superior*
sound for the second. The sounds devel-
oped at the orifices of the right ventricle
are better heard towards the right edge of
the sternum; those developed at the orifices
of the left ventricle are better heard to-
wards the left edge of this bone; and the
American experimenters determined that
the ventricular systolic sound on the right
side was sharper and clearer than that on
the left, which was more dull and pre-
longed.

*Normal limits and intensity of the heart's
sounds.*—There is considerable difference
even in health in different individuals in
the intensity as well as in the extent over
which the sounds of the heart are audible:
in some subjects they are limited to the
præcordial region, and are comparatively
feeble there; in others they extend much
beyond the præcordial region, and are loud
there. Whether the sounds are feeble or
the contrary, and whether they are limited
to the præcordial region or not, will depend
upon a variety of circumstances—as the
intensity of the sounds themselves, which
is different in different subjects; as the
coverings of the chest are thick or thin; as
a larger or smaller surface of the heart
comes in contact with the parietes; as the
lungs are largely developed and overlap
the heart, or the contrary; and as the
chest is capacious or narrow.

Dr. Latham,* in his admirable lectures,
speaking of the "natural limits of the
heart's sounds," observes—"It is a preli-
minary point which some have thought
most important to be determined with pre-
cision: but no good ever comes from pre-
tending to more precision than the thing
itself admits of; and I am sure this matter
does not admit of much. The præcordial
region, it has been said, defines it; but

* Lectures on Diseases of the Heart, vol. i.

surely the second sound always exceeds that limit, and is audible also in the course of the aorta, of the pulmonary artery, and of the carotids." "With respect to the first sound, I should be at a loss to mark the exact space within which healthy proportion and healthy structure always required it to be heard, and in neither more nor less. There are so many circumstances, some consistent with health in the largest sense, and some exclusive at least of its disease, which make the systolic sound of the heart more or less extensively audible, that (I am persuaded) two healthy persons would not easily be found in whom it would be heard exactly within the same thoracic space. Whether a man be fat or lean will always make a great difference. In the one it will be kept within the præcordial region; in the other it will be carried beyond it. Fat is so bad a conductor, that, where it greatly abounds, it will restrict the sound to less than the entire præcordial region, even to a very small part of it; so that you will not be able to hear the heart further than you can feel its impulse, or further than its apex. But mere skin and bone are such good conductors, that in very thin persons the sound will be spread very far beyond the præcordial region, and will be heard at any part of the chest to which you apply your ear."

"I believe that in most persons of what is called a nervous temperament, even when they are under no conscious excitement, the heart's sounds are to be heard beyond it; and I believe, too, that in persons of this temperament the heart's sounds are apt to be of a higher intonation. One condition, no doubt, is the result of the other. In proportion as the sounds of the healthy heart are more highly intoned, they acquire a greater audible extent. The louder they are, the further you hear them; and it is the very characteristic of a nervous heart to have its sounds both highly intoned and extensively audible."

Mechanism by which the sounds of the heart are produced.—We come now to the most difficult part of the subject—the cause of the sounds of the heart, or the mechanism by which they are produced: it is the one upon which the greatest difference of opinion has existed among physiologists and anatomists, and for the explanation of which the greatest number of hypotheses have been advanced.

Theories of the cause of the first sound.—It must be borne in mind that at the period at which the first sound of the heart is heard—

1st. The muscular walls of the ventricles contract, and the cavity of the ventricles is diminished.

2dly. The mitral and tricuspid valves close their respective orifices.

3dly. The blood is propelled with considerable force into the aorta and pulmonary artery.

4thly. The valves at these orifices are suddenly elevated; and

5thly. The impulse of the apex of the heart against the parietes of the chest takes place.

Now the first sound of the heart must obviously be due to one or other of these acts, or to a combination of them; and it will be necessary to notice shortly the theories which have been advanced under this head.

As it has been completely proved that the first sound of the heart accompanies the ventricular systole, any theory founded upon a different order of succession of the heart's motions must be rejected,—such as, that it is due to the systole of the auricles, or to the diastole of the ventricles, or to the systole of the left ventricle alone, the second sound being attributed to the systole of the right; because it is well known that the two ventricles contract simultaneously; that the ventricular diastole occurs at the period of the second, not of the first sound; and that the auricular systole does not take place at the period of the first sound of the heart.

The theories which have been advanced in order to explain the mechanism by which the first sound of the heart is produced, may, for convenience sake, be considered as the cause is supposed to be extrinsic to or intrinsic to the heart. Thus, under the first, it has been attributed to the impulse of the apex against the parietes of the chest; under the second head, it has been attributed to muscular contraction—in other words, to the successive shortening of the muscular fibres of the parietes of the ventricles. This is the oldest theory: it was adopted by Harvey, Haller, Senac, Bichat, and Corvisart. 2dly. To the sudden closure of the auriculo-ventricular valves. 3dly. To the friction of the blood against the parietes of the interior of the ventricles, or of the orifices of the large arteries. 4thly. To the collision of the opposite internal surfaces of the ventricles at the conclusion of the systole. 5thly. To the straightening or elevation of the sigmoid and semilunar valves, caused by the wave of blood transmitted by the ventricles; and, lastly, to two or more of the foregoing causes combined.

Theory of the sound being produced by the impulse.—Majendie is the principal supporter of the theory that the first sound of the heart is caused by the impulse communicated by the apex of the organ to the parietes of the thorax during the ventricu-

lar systole. This sound has, however, been distinctly heard in experiments upon animals where the anterior parietes of the chest were removed, and the heart fully exposed, as well as in infants labouring under ectopia cordis.

Theory of muscular contraction.—Those who refer the first sound of the heart to the muscular contraction of the walls of the ventricles include two phenomena under this head—viz., “the sound of muscular extension or tension,” and the “bruit musculaire” or “rotatoire.” Dr. Hope refers this sound essentially to muscular extension, which, according to him, is “a loud smart sound, produced by the abstract act of sudden jerking extension of the already braced muscular fibres at the moment that the auricular valves close.” “It is (he observes) essentially different from the bruit musculaire, since it may be produced in a dead muscle, and may attain a high degree of loudness or sharpness; whereas bruit musculaire can only be produced in a living muscle, and is never more than dull and subdued.” Other physiologists suppose the cause of this sound to lie exclusively in bruit musculaire. Dr. Blakiston is of opinion that it is caused by “the friction of the muscular fibres of the walls of the ventricles *inter se*.”

Theory of the collision of the opposite walls of the ventricles.—By some physiologists the first sound of the heart has been attributed to the collision of the opposed internal surfaces of the ventricles at the conclusion of the systole; but, as it is a doubtful point whether the ventricles completely empty themselves during their systole, and as it is quite certain that no such collision of the opposite walls of the ventricles takes place, this theory may be dismissed.

Valvular theory.—By many physiologists the first sound of the heart has been attributed to the sudden tension or closure of the mitral and tricuspid valves which occurs during the ventricular systole. Dr. Billing in England, and M. Rouannet in France, are the most distinguished advocates of this theory. But, as the auriculo-ventricular valves close their respective orifices at the very commencement of the systole of the ventricles, this act is certainly not capable of producing the prolonged first sound of the heart. According to M. Cruveilhier, on the other hand, the first sound is due not to the closure of the mitral and tricuspid valves, but to the straightening or elevation of the sigmoid and semilunar valves, caused by the wave of blood transmitted by the ventricles.

Theories of the motion of the blood.—According to M. Pigeaux, the first sound of the heart is due to the friction of the

blood against the walls of the ventricles, and of the orifices and parietes of the large arteries, during the ventricular systole. According to M. Gendrin, it is due to the “vibrations which result from the sudden change of form which the blood experiences during the ventricular systole.” According to others, to the collision of the particles of the blood against each other, and against the walls of the ventricles, during the systole.

Theories of the cause of the second sound.—The second sound of the heart is heard at the period of the ventricular diastole; and it must be borne in mind that during this act—

1st. The muscular fibres of the walls of the ventricles are relaxed, and the ventricular cavities become enlarged.

2dly. The auriculo-ventricular valves are opened, and the blood passes from the auricles into the ventricles, through the mitral and tricuspid orifices.

3dly. The sigmoid and semilunar valves are pressed down by the column of blood above them, and the aortic and pulmonary orifices are closed.

The second sound of the heart must, therefore, have its cause in one of these acts, or in a combination of them; and any theory founded on a different order of succession of the heart's motions cannot be correct, as that this sound is due to the auricular systole (Laennec), because the auricles contract immediately before the ventricles; or that it is due to the auricular diastole (Beau), because no sound is produced during this act; or that it is due to the systole of the right ventricle (Piorry), because both ventricles contract simultaneously.

The theories which have been advanced to explain the mechanism by which the second sound of the heart is produced may, like those of the first sound, be considered under the head of causes extrinsic to the heart, and causes intrinsic to it. Thus Majendie attributes the second sound to the impulse communicated by the ventricles to the parietes of the chest during their diastole; and Dr. Turner, to the falling back of the heart against the pericardium at the moment of the ventricular diastole. But the second sound was heard in experiments upon animals where the ribs and sternum were removed and the pericardium laid open, as well as in infants labouring under ectopia cordis.

Those who refer the second sound to causes intrinsic to the heart consider that, like the first sound, it may have its cause in muscular action, in valvular action, or in the motions of the blood. Thus by some this sound has been supposed to be due to the stretching of the muscular fibres of the

ventricles in their diastole; but the muscular fibres are relaxed during this period of the heart's action. It has been also attributed to the rush of blood through the auriculo-ventricular orifices during the ventricular diastole; to the collision of the blood against the parietes of the base of the ventricles during their diastole; to the sudden closure of the sigmoid and semilunar valves at the moment of the ventricular diastole; or to the recoil of the column of blood in the aorta and pulmonary artery upon the sigmoid and semilunar valves at the moment that the ventricles dilate.

Theory of the sounds of the heart most generally received.—The theory of the mechanism by which the sounds of the heart are produced which is most generally received is as follows:—

First sound.—The first sound of the heart is regarded as a compound sound, partly valvular and partly muscular, the valvular portion being its first and loudest part, and being due to the sudden tension or closure of the mitral and tricuspid valves. The muscular portion of the sound, which is dull and prolonged, is supposed to be caused by the contraction of the muscular fibres of the walls of the ventricles, and to be due essentially, according to Dr. Hope, to "muscular extension," but receiving a "prolongation, and possibly an augmentation, from bruit musculaire;" according to others, to bruit musculaire alone, or to friction between the fibres of the muscular tissue of the ventricles.

That this sound is partly due to the sudden closure of the mitral and tricuspid valves, is considered to be proved "by the sound being loudest over the parts of the ventricles nearest to the auricular valves;" 2dly, "when valvular extension was prevented by holding the mitral valve open (in experiments upon animals), this greatly diminished the first sound;" 3dly, "whenver the auricular valves were destroyed, or the blood evacuated out of the ventricles, the sound became dull and obscure;" and lastly, by the character of the first sound in dilatation with attenuation of the ventricles, when it closely resembles the second sound.

That the first sound of the heart has its cause, likewise, in contraction of the muscular fibres of the walls of the ventricles, is considered to be proved by the "character of the sound,"—by its continuing during the entire systole—by its being still heard, although weaker, in the heart of animals removed from the body,—"by its being heard, although modified, in animals, when the auriculo-ventricular valves were prevented from acting, or when the blood was prevented from entering the cavity of the ventricles by pressing upon the orifices,"—

"by the sound being louder over the surface of the ventricles than over the origin of the large arteries,—and finally, by the sound being loud and short, when the walls of the ventricles are thin; and dull and prolonged when its walls are thick;" because a thick ventricle, *cæteris paribus*, takes a longer time to contract than a thin one.

Second sound.—The second sound of the heart is supposed to be due either to the sudden closure of the valves at the orifices of the aorta and pulmonary artery, owing to the recoil of the blood upon them at the moment the ventricular systole ceases; or to the shock of the column of blood in the aorta and pulmonary artery, which recoils upon these valves at the moment of the ventricular diastole. This theory is supposed to be proved "by the second sound of the heart being loudest over the sigmoid and semilunar valves, and a little above them"—"by the sound ceasing in experiments made upon animals, when the reflux of the blood upon the semilunar valves was prevented by compressing the arterial orifices with the fingers"—and "by its being diminished when a semilunar valve in one artery was hooked up, and replaced by a murmur from regurgitation when the same was done in both arteries."

The following experiment was made by M. Bouillaud, to prove that the second sound of the heart is caused by the reflux of the column of blood upon the sigmoid and semilunar valves. He attached one extremity of a short glass tube, of an inch bore, to the aorta immediately below the semilunar valves, and to its other end a bladder full of water. Another tube, four feet long, was connected with the aorta above the semilunar valves. The bladder was suddenly compressed at intervals, so as to jerk up the fluid, and each time that the pressure on the bladder ceased, and the column of liquid was allowed to fall back upon the valves, a sound very analogous to the second sound of the heart was heard.

A somewhat similar experiment was made by Dr. Corrigan, but with a different result. He removed the heart and ascending aorta of an ass, and then "tied it on the end of a leaden tube of a corresponding diameter, about five feet long; about two or three inches of the aorta then being free from the lower extremity of the tube. In this state, holding the sides of the aorta together below, he filled the tube with water, and then placing the thumb on the upper end, so as to close it, the fingers were withdrawn from the lower end, and the upper end still remaining closed, the external pressure of atmospheric air kept the two sides of the aorta below together, and no fluid escaped. The ear was then applied to the lower end of the tube, close to the

aorta, and the thumb being suddenly withdrawn from above, the whole column of fluid came suddenly down, and distended the aorta and valves; and yet there was no sound whatever similar to the second produced." He then "attached a piece of sounding-board, to assist the ear, and the result was the same as before."

Remarks on the foregoing theory.—The foregoing theory, it will be observed, omits from the elements capable of producing the sounds of the heart, all consideration of friction between the blood and the parietes of the orifices of the heart, in its passage into and out of the ventricles, during their systole and diastole. Yet when we come to describe the abnormal sounds heard in diseased states of the valves and orifices of the organ, we shall find that this very element, which is rejected as incapable of producing the normal sounds, is set down as the one which almost exclusively gives rise to the abnormal sounds of the heart. Now when we consider the force and rapidity with which the blood is propelled by the ventricles, particularly by the left, there can be no doubt that there is a considerable degree of friction between the blood and the parietes of the orifices through which it passes; and that this can scarcely happen without producing sound, appears evident, because even a slight impediment to the current of blood is sufficient to convert the normal first sound of the heart into a murmur.

Thus in experiments made upon large animals, when the calibre of the aorta near its origin was narrowed by pressing upon it during the ventricular systole, the first sound of the heart was converted into a murmur. Again, if the stethoscope is applied over a large artery, a short, slight, single sound is heard at each systole of the left ventricle; but, if pressure is made upon the vessel so as to diminish its calibre, a murmur will take the place of the normal sound. Again, the blood in its passage through the veins causes no sound appreciable to the ear: under certain circumstances, however, sound is developed in particular veins, when their coats are made tense, and when their calibre is diminished by pressure with the stethoscope. This sound is familiar to us as the venous murmur.

Now, in each of these instances, there is an obstacle or impediment to the passage of the blood, and the increased friction, which necessarily ensues, is sufficient to convert the normal sound into a murmur. It seems probable, therefore, that abnormal sounds are nothing more than exaggerated normal sounds, exaggerated because the friction between the blood and the parts through, or along which it passes, is in-

creased; and if we admit, as the foregoing instances seem to prove, that normal sounds can be converted into abnormal sounds, simply by increase of friction, it seems not unreasonable to conclude that both are developed by the same agency.

In addition, we know, that, in aneurism springing from the arch of the aorta, a double sound is constantly audible, and this double sound remarkably resembles the double sound of the heart; so close indeed is the resemblance, that the second sound of aneurism in this situation is erroneously supposed by many to be the second sound of the heart transmitted to the aneurismal sac. We also know that the first, or the second, or both the aneurismal sounds, are not unfrequently converted into murmurs, which have precisely the character of the murmurs heard in cases of valvular disease of the heart.

Now, in aneurism, in this situation, we have simply a sac communicating with a large artery by a single orifice, which is constantly patent; the sac is traversed by the blood propelled at each systole of the left ventricle, and into it the blood regurgitates at each diastole of the ventricle; yet every variety of normal and abnormal sound developed in the heart, with its muscular walls and valvular apparatus, may be produced also in an aneurismal sac which has neither the one or the other. It is scarcely, therefore, unreasonable to conclude, that the agent which is capable of generating sound in the one case is capable of developing analogous sounds in the other; and that, as sounds almost precisely similar to those of the heart, in its healthy as well as in its morbid state, can be produced independent of valvular extension, or muscular contraction, the latter are not such essential agents in the production of the heart's normal sounds as is generally supposed.

[To be continued.]

INVERTED TOE-NAIL.

THE idea, now almost established, that the fleshy part of the toe, not the nail, is in fault in this affection, was confirmed in our cases. Four were entirely cured without any operation on the nail, by the introduction of lint covered with cerate, and the use of rest and emollient poultices, or water-dressing, aided perhaps by adhesive straps, to draw the nail from the inflamed part.

One case presented of very obstinate disease at the root of the nail itself, which was extracted three times without more than temporary benefit.—*Notes of Hospital Cases, by Dr. Hartshorne, in American Journal of Med. Sciences, Jan. 1850.*

Original Communications.

BRIEF NOTES ON THE DISEASE, INDIAN VILLAGE CHOLERA.

BY ASSISTANT-SURGEON MOORE, B.A.
Gwallior Contingent.

PART I.

"IN its progress, the Indian village cholera is divisible into three stages. The symptoms which denote the premonitory stage from the second or intermediate stage, and this latter from the third or last stage, are in general well marked. During the visits I have made from time to time, in villages where the cholera has been raging, as well as in the course of visits to vessels lying off Calcutta, freighted with coolies, I have had frequent opportunities of noting the onset of the disease, the development of the symptoms, the progress and fatal termination of those symptoms.

"Whether cholera has come under my observation in the huts of the natives in their villages, or on board ship, when in medical charge of cooly emigrants, or in regimental and civil hospitals, I have noted a degree of uniformity in the symptoms by which each stage of the disease has been indicated. The exceptions have been few. I propose, therefore, to select the results of cases treated by me on one occasion as illustrative of the particular features of each stage of the Indian village cholera.

Fatal cases of cholera in the third or last stage.—"The Indian labourers, destined as emigrants for Mauritius, had not been on board the "ship Sophia" more than twelve hours, when I was summoned from shore to visit the vessel, in consequence of the outbreak of cholera. The disease had commenced with the men. Until the third day's sail from the Land Heads, men, women, and children, were attacked by it. To our relief, the cholera then disappeared. It may not be out of place to notice, that by this time few of the coolies were able to appear on deck in consequence of sea-sickness.

"The symptoms and general features of the disease, as the vessel lay at anchor off Cooley Bazar, were of the

worst type. When I went on board, there were three men in the last stage of cholera. They were cold, and covered with a clammy sweat. The perspiration was oozing out in large drops on the forehead, the neck, and on the chest. Their eyes appeared sunken in their sockets. Their breath was cold. In each case the tongue was cold. Their features were shrunk. The skin of the face seemed to have been pinched backwards. The voice was feeble, hollow, inarticulate. Their strength was completely prostrated. In two of these cases the pulse at the wrist was imperceptible; in one barely perceptible. In the larger arteries the pulse could be felt. It was quick, and communicated to the touch a feeble vibration.

"The impulse of the heart could not be felt. The action was rapid, distant, and indistinct. The first, or muscular sound of this organ, was almost inaudible. The second, or arterial* sound, was clear, sharp, distinct. The breathing was short, and at intervals laboured. The extremities were icy cold. The nails of the fingers and toes of a deep blue colour, as if steeped in indigo, were curved inwards. Their pulpy points were shrivelled. The calves of the legs suffered from spasmodic contractions. The muscles of the forearm and arm, in like manner, were seized with convulsive spasms, and became round and hard, as resisting under the grasp as balls of iron.

"Vomiting and purging had ceased in two of these cases, and were succeeded by hiccup and dry retching. In the third case, the rice-water or sero-mucous discharge continued to trickle from the bowels, without the knowledge of the patients. Their only desire was for cold water, to quench an insatiable parching thirst.

"At the commencement of the attack, frequent and copious rice-water discharges from the stomach and bowels were the most prominent symptoms. Weight, and oppression and spasmodic twinges in the epigastrium, and along the course of the diaphragm, quickly followed. In each case the abdomen

* I believe the credit, if there be any, may fairly be claimed by me, of having upset the absurd theory, that the second sound of the heart is valvular; and the credit, also, of having established the fact, that the sound heretofore called the second sound of the heart, is neither more nor less than the sound proceeding from the action of the large arteries.

was sunken, doughy, inelastic under pressure, without pain or tenderness, until the spasms extended to the recti muscles. The secretion of urine was suppressed.

"These cases of cholera, in the last stage of the disease, had well nigh run their course previous to my visit on board. I need scarcely add, they terminated fatally.

Cases of Cholera in the second or intermittent stage.—"Besides the three cases in the third or last stage of cholera, there were two men, one boy, and one woman, in the second stage of the disease. Vomiting and purging were the most prominent features in each case. These were the symptoms chiefly complained of by the patients. The liquid discharges from the bowels were slimy, sero-mucous, depositing a flaky sediment, and resembled congee-panee, or rice-water. The fluid rice-water discharges from the bowels occurred sometimes twice, sometimes three times, or more frequently, in the hour, but occasioned no pain nor uneasiness in the abdomen.

"The act of vomiting was frequent, and attended with a feeling of constriction at the pit of the stomach, and with spasmodic twitches shooting back towards the spine. The abdomen was free from pain on pressure, felt soft to the hand, and in three cases was inelastic. In a fourth case it was distended with flatus, but in none was the abdomen pinched inwards and backwards towards the spine.

"The feet and hands retained some degree of warmth. In the rest of the body the heat was above its natural standard. In the calves of the legs the muscles were spasmodically contracted. The spasms, however, were not severe, nor protracted in duration. They yielded in general to the hand rubbing and shampooing used by their friends. The tongue in each case was loaded, moist, and warm. With this moisture of the tongue thirst was urgent. The desire for cold water, to allay the dried parched feeling in the mouth, could not be satisfied. They were allowed to drink as much water as they wished.

"The pulse was quick, varying from 110 to 120, sharp, contracted, wiry under the finger, perceptible at the wrist. The impulse of the heart could be felt. Its action was strong. Its sounds were distinct. In all there was a marked degree of anxiety in the coun-

tenance. Some dulness and suffusion of the conjunctiva of the eyes were noticed, but there was not present that sunken state of the eyeballs into their sockets so characteristic of the advanced stage of cholera. With the exception of the woman, the patients, although weak, possessed sufficient strength to walk from the larboard to the starboard side of the vessel. The secretion of perspiration from the skin was checked. The secretion of urine was suppressed in two; in the others, when passed, it was scanty in quantity, and high-coloured.

"As to the origin of their illness, they were not able to give any satisfactory account. They felt themselves suddenly prostrated in strength after arriving on board. They suffered from languor, from pains and aches over the body and in their limbs, striking upwards and inwards towards the pit of the stomach. All their pains seemed to centre in this particular part of the stomach. Upon these, sickness of the stomach, quickly followed by vomiting and purging, supervened. The discharges of fluid afforded relief. They were not described as having added to their sufferings.

"The woman remained under treatment for twelve or fourteen hours. The symptoms progressed unfavourably from hour to hour. They assumed the features of the third stage of cholera. She died. The treatment adopted in the case of the boy checked the vomiting and purging. Hopes of his recovery were entertained. They were not realised. The stage of collapse set in. The pulse disappeared at the wrist. The body became cold, and covered with a clammy sweat. The eyes sank in the sockets. The muscles of the extremities were cramped into hard, round balls. The tongue became cold; the breath cold. He died.

The recovery of the other cases was satisfactorily established before we cast anchor in Sangor Roads.

Cases of cholera labouring under the premonitory symptoms.—"The cases labouring under the premonitory symptoms of cholera were few. They did not number more than four. The symptoms of which they complained were prostration of strength, wandering pains about the body, more particularly in the loins and abdomen; distaste for food; nausea, and inclination to

vomit; rumbling of the bowels, occasionally attended with griping and looseness; thirst, with full and loaded tongue. The pulse in each case was full and compressible, ranging between 90 and 95. The skin was hot, rough, and dry.

"Three of the cases recovered under the treatment adopted. They were comatose before the vessel reached Diamond Harbour. The symptoms in the fourth case did not yield so soon to the treatment. The symptoms of the second stage rapidly set in. With difficulty this man's life was saved.

"Such, then, were the symptoms by which the premonitory, intermediate, and last stages of the Indian village cholera, amongst these Indian emigrants, were denoted. Such, I may add, is the group of symptoms which has marked the progress of these three stages of cholera in almost all the cases noted by me. With atmospheric changes, these symptoms may vary in degrees of intensity. With atmospheric changes, the virulence of the symptoms may become modified. Under the influence of certain changes in the atmosphere, the disease may disappear as suddenly, and in as unaccountable a manner, from its locality on shore, or from the vessel afloat, as it has made its appearance suddenly and unexpectedly. These modifications in the symptoms, arising from the state of the atmosphere, or from peculiarities in the constitutions of patients, I regard as exceptional; so marked, in general, has been the uniformity in their intensity during the development of each stage of the disease.

"Whatever the causes may have been which contributed to the sudden appearance of cholera on board, there can be little doubt that the cases which terminated fatally exhibited the symptoms of the disease in its severest form.

"The symptoms recorded in the fatal cases may be regarded as those met with in three-fourths of the cases which terminate in like manner. In this, the third or advanced stage of the Indian village cholera, the discrepancy which exists in the catalogue of symptoms is perhaps less than in any other disease with which I am acquainted. The accurate record of the symptoms in a single case will serve to denote those in nine-tenths of the cases similarly affected, and swept away in the same incredibly short space of time. More par-

ticularly, in reference to the natives of India, does this observation hold good.

"A single report from a village, to the effect that cholera has made its appearance, is sufficient warning that in the course of a few days the inhabitants of that same village will be carried off by tens and twenties, and that in the reports subsequently made there will not be the slightest difference in the development and rapid progress of the symptoms, until the force or virulence of the cholera shall have expended itself.

General results of treatment in the third stage.—"When cholera has advanced to the third stage, medicine and the skill of the physician can effect but little. Cases of recovery, under successful treatment, have been recorded. In what form of disease have not cases of the last or hopeless stage been successfully treated, and duly recorded?

"The *Pharmacosia* has been ransacked for some potent specific,—for some infallible anti-cholera pill, or powder, or drop, or mixture. Apparently the search has not been made in vain. For this, the direst scourge of the human race, I believe there are more specifics known, and publicly advertised, than for any other disease to which the human system is subject,—the venereal disease excepted. Did these anti-cholera specifics possess only a fractional part of the virtues attributed to them by their puff-masters, mankind would have little to dread from cholera.

"In the East, or elsewhere, cholera in its third stage is, numerically speaking, as fatal, perhaps more fatal, than yellow fever in the West, when black or coffee-ground vomit indicates that the disease has progressed to an advanced stage.

"An eminent physician in British Guiana, in listening to the thanks of a British sailor, when discharged from hospital after his recovery from yellow fever, with black or coffee-ground vomit, stopped him abruptly.—'My man, you're more indebted to God's providence for your recovery, than to the skill of the doctors, or to the virtues of their medicines. Now, discharge a portion of that debt to your Creator, by doing good to your fellow-creatures. Bear this in mind, whenever you see or hear of any comrade taken ill on board, or on shore, as you were at first; send him off to us at once. We doctors may be able to do something for him then.

"The same remark might with propriety be applied to cholera in its advanced stage. However, cases have recovered under the skilful treatment of skilful physicians. They have recovered under the use, and by the instrumentality of medicines, trumpeted forth as potent, infallible specifics. True! these facts cannot be questioned. On the other hand, it would be satisfactory, as well as instructive, to have figured statements published, exhibiting the exact numerical proportion which the cases of recovery from cholera, in its third stage, bear to the number of cases skilfully, yet unsuccessfully, treated by these same potent, infallible specifics. The first glance at that figured statement will prove to non-professional, as well as to professional men, how ineffectual medical treatment has been in endeavouring to restore life to a breathing corpse.

"The results of medical treatment in this stage of cholera ought to be impressed on the minds of the public, to arouse some degree of earnestness on their part to befriending themselves. The premonitory stage, and the second or intermediate stage of cholera, are amenable to treatment. Medicines and remedial measures can effect much to arrest the progress of cholera.

"If we direct the Indian village cholera of the terrors which its name conveys to the mind,—if we examine its symptoms in the three different stages,—if we examine also the source from whence these symptoms proceed, we may be able to obtain a clue to some mode of subjecting cholera to rational, and not to empirical treatment. But, first, it is necessary that our ideas as to the form of disease be clear and distinct. If two or more forms of disease be grouped together under the general term cholera, and be recognised as such by the profession, it is mere waste of time, and waste of words, to discuss the subject. The looseness of medical phraseology is proverbial; and the looseness with which diseases, without the slightest relationship to each other, have been jumbled together, has created confusion.

"Be it our task, then, to steer clear of such imaginary forms of disease,—as windy cholera and dry cholera,—of bilious cholera and putrid cholera, and of an infinite variety of subdivisions of cholera. They have no existence, save

in the imaginations of those who write books and pamphlets, and nonsense.

Seat of the disease.—"The seat of cholera,—the genuine type of which I consider to be that form prevalent in Indian villages during certain months of the year,—is in the mucous membrane of the bowels, and in the structures subjacent to, and contributing to the formation of, the several coats of the intestines. In a practical point of view it is a matter of little consequence in which of the component strata of the mucous membrane of the intestines the source of the symptoms, and consequently the seat of the disease, be fixed.

"This system of isolation of a particular membrane to the exclusion of all others cannot serve any practical end in the treatment of disease. Let others settle, beyond the possibility of any further dispute, whether the symptoms of cholera originate solely in a morbid condition of the epithelium, or in that of the membrana propria. Be it the province of others to settle whether the symptoms spring from a disorganised state of the blood circulating through the minute net-work of intestinal capillaries, from a feeble and paralysed condition of the coats of this vascular tissue, or from a palsied state of the ganglionic system of nerves, and of the nervous filaments distributed to the intestines. Let it be determined by others, whether the symptoms can be traced to a fretted and irritable state of the nuclei or cytoblasts imbedded in the mass of amorphous matter,—or to irritability, vascularity, and incipient inflammation of the solitary and agminate glands of the intestinal tube:—for all practical purposes it will suffice to know, that collectively, not separately, do the component strata of tissues endowed with vitality contribute to produce the symptoms characteristic of the Indian village cholera.

"Are we never to arrive at a rational conclusion as to the nature of cholera,—as to the seat of cholera,—as to the invariable and unvarying symptoms of cholera,—as to the treatment of cholera on a rational basis? Is it decreed, that, year by year, and visitation after visitation, we must grope in the dark, blinded by ignorance? If pathological anatomy be a reality, and not a delusion, it ought not to be so.

"In the mortality list is contained the pith of every proof required to upset

all speculative theories and discordant opinions as to the nature, as to the seat, and as to the source of the symptoms in this scourge, cholera *

"Beyond the possibility of cavil, pathological anatomy has revealed, and has proved, that the only type of disease deserving the name cholera, originates in a blaze of inflammatory action, involving every membrane, every tissue, and every glandular body in the gastrointestinal canal, from the œsophagus to the rectum. This morbid condition of the stomach and intestinal canal will be found in every case of cholera where the examination of the viscera has been conducted within one hour after death.

"Pathological anatomy has revealed, and has proved, that the symptoms characteristic of cholera arise from intense vascularity,—from a fretted and irritable and sero-mucous eliminating conditions of the mucous membrane and subjacent tissues of the stomach and intestinal canal. Pathological anatomy has revealed, and has proved, that the elimination, filtration, percolation, and oozing out from the system of serum, of mucus, of lymph, and of the saline ingredients of the blood, into the cavity of the stomach and intestinal tube, tend to devitalise that portion of the vital fluid, which remains in circulation. Pathology has revealed, and has proved, that in consequence of this extensive and rapid exudation from every inch of the internal mucous surface, the relative proportions between the serum and crassamentum, and other ingredients of the blood, are destroyed: the blood in circulation becomes thick, black, and tar like; flows sluggishly towards the heart, and stagnates in the parenchymatous tissue of one or several of the solid viscera. Finally, this sudden break-up of the normal, the regulated proportions between the constituent principles of the blood, proves to be the direct cause of the fearful rapidity with which the powers of life sink.

"Unless the viscera be examined at an early period after death, we can form but a faint idea as to the mischief which has been in active operation during life. If deferred for several hours, the appearances in the stomach and duodenum, jejunum, ileum, colon, and rectum intestines, are illusory. The diffuse and continuous scarlet and deep crimson

red efflorescence will have subsided. With the exception of a faded rose-coloured tint, and of a few straggling veins gorged with blood, there will not remain a trace of the mucous membrane, and of the subjacent tissues, having been the seat of inflammatory action. The internal surface of the stomach will be pale, and consequently deceptive, although covered over with a layer of tenacious, glutinous, or gelatinous mucus, semitransparent, and of the consistence of a thick solution of isinglass. The internal surface of the small intestines will be pale, or will present a faded rose-coloured tint, although besmeared with a ropy, inspissated, and gelatinous mucous exudation: and although at the same time they are distended with secretions of serum, of mucus, and of lymph, all blended together, and forming a thick puddle.

Symptoms of the disease.—"Rice-water discharges from the bowels, and rice-water vomitings from the stomach, constitute the tests of the true type of cholera. All other symptoms may be regarded as secondary to these. In nine cases out of ten they follow as a necessary consequence, when the cases have been abandoned to themselves.

"A medical man cannot be more practically acquainted with this type of cholera than the native, who, for a series of years, has been an eye-witness to its ravages in his village. That native looks forward to the re-appearance of cholera year after year, with the same degree of certainty with which he looks forward to the return of the rainy season in each year. Question him as to the symptoms of the disease—question him as to those symptoms in particular regarded by him as proofs that his fellow villagers had been attacked by cholera, and had been swept away through its deadly influence.

"Rice-water discharges from the bowels, and rice-water vomitings from the stomach, are the proofs associated in his mind with the severest, the worst type of the disease. Without the existence of these symptoms he cannot be persuaded that his fellow villagers have died from cholera.

"What, then, are these rice-water discharges?

"So far as inspection and analysis can be relied on, the dejections from the bowels, and the vomitings from the

* *Vide Cases.*

stomach, resembling congee-panes, or rice-water, are sero-mucous secretions exuded through, exhaled from, or thrown off by, the mucous and subjacent membranes of the stomach and bowels. They consist of globules of lymph, globules of mucus, and globules of the serous and saline ingredients of the blood. They appear to differ in no essential particular from the sero-mucous secretions copiously and rapidly thrown off from the mucous membranes in other parts of the body. In point of consistence, and in point of quality, inspection and analysis, and the microscopical researches of anatomists, have not as yet established any material difference. This fact is of importance, viewed in reference to the treatment of cholera.

"The globules of lymph, with their discs—the globules of mucus, with their discs—the particles of the serous and saline ingredients of the blood, presenting every variety of shape, elliptical, circular, octagonal, and irregular, under the magnifying powers of the microscope, had been mistaken for fungoid bodies, or for some other fanciful description of living organism. The bodies seen under the lens of the microscope are merely the constituent particles of the fibrinous and sero-mucous secretions eliminated from the irritated, the vascular, and the intensely inflamed surface of the stomach and intestinal canal.

"The quantity more than the quality of these sero-mucous discharges imparts to the Indian village cholera its formidable nature. The quantity, more than the quality, of these same discharges, in like manner draws a broad line of distinction between the fatal effects of the disease, cholera, compared with the fatal effects of other diseases originating in the morbid condition of the mucous membranes in other parts of the body. The quantity, as well as the quality, cannot be too closely observed. Combined, they serve as guide-marks to the practitioner in the recognition of cholera. They also serve as guide-marks in the treatment to be adopted during its rapid progress from stage to stage.

"If we reflect for a moment on the extent of mucous surface, commencing at the cardiac orifice of the stomach and terminating at the rectum, involved in a blaze of inflammatory action, involved in a continuous sheet of deep

crimson or scarlet efflorescence, and engaged in eliminating from its structures these rice-water or sero-mucous discharges, it ceases to be a matter of surprise that cholera should prove rapid in its progress and fatal in its consequences.

When, therefore, the Indian village cholera has had its way unchecked,—when the premonitory symptoms have been trifled with,—when the intermediate stage marches apace, whilst medical men befooled themselves in experimenting with popular delusions, called specifics,—when rice-water discharges from the bowels follow at short intervals and in quick succession, rice-water vomitings from the stomach,—the victim from cholera in the short space of a few hours virtually becomes a *breathing corpse*, with icy breath, stopped pulse, large drops of cold, clammy sweat pouring from every pore: with blood congealed, features pinched, and skin blue and shrivelled, that victim utters in hollow, but prophetic accents, his conviction of approaching death. Hence the necessity of impressing on the mind of the public that they owe a duty to themselves to pay strict attention to the first indication of derangement of the stomach and bowels, when the grim visitant has made its appearance in their locality.

"Too much stress cannot be laid on the excessive elimination of sero-mucous fluid, rendering cholera formidable in its nature, and disproportionately fatal in its effects, compared with other diseases. From a small extent of surface, sero-mucous discharges, when profuse, are not altogether free from serious consequences. From so trifling a disease as cold in the head, I have seen men of the strongest frame of body completely prostrated. In one case, a man of powerful muscle, the mucous membrane of the nose was affected. Sero-mucous discharges were eliminated in profuse quantities. In the words of the patient, the mucus flowed in a continued stream from the nose, from morning to night. From a cause so trivial as this, the man lay in bed completely exhausted: his pulse was small, quick, and wiry. His face was flushed. His eyes were suffused. The constitutional disturbance was marked. The mucous membrane of the nose was irritated, but comparatively pale.

"The excessive elimination of sero-

mucous fluid from the mucous membrane of the bronchial tubes of the lungs has proved rapidly fatal in many cases. During the epidemic influenza of 1838-39, a lady had been complaining for a few days of the symptoms of slight fever. Unexpectedly she commenced to expectorate in large quantities a sero-mucous fluid of the consistence of thin gum water. This was followed by an oppression of the breathing, and by a sense of suffocation. During the day her sufferings can scarcely be described. Towards evening her face became livid, her extremities cold, the surface of the body of a bluish colour. The muscles of the chest became spasmodically contracted, in the violent efforts made to respire and to expel from the lungs this rapidly secreted mucus. All efforts to arrest the disease, and to afford relief to the patient, failed. Medicine after medicine was administered, without the slightest impression having been made upon the symptoms. In thirteen hours from the time she commenced to expectorate, she was a corpse. In the post-mortem examination the trachea and bronchial tubes were found loaded with a thin, gum-like, sero-mucous fluid. The mucous membrane was pale. There was scarcely the trace of a bloodvessel visible.

"When we place in juxta-position with facts such as these the results of excessive elimination of sero-mucous fluid from the entire extent of the internal surface of the stomach and bowels, can it be any longer a matter of speculation why the Indian village cholera should sweep away its victims in so incredibly short a space of time?"

HINTS FOR THE RELIEF OF THE PARALYTIC.

Communicated by

EDMUND BOULT, Esq.

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Surgeon to the Bath Eye Infirmary.

THE amount of physical distress and suffering endured by the paralytic varies much in different cases; but I believe it to be in many instances greater than we are in the habit of supposing: this may arise from causes not always sufficiently appreciated by those whose office it is to afford relief to the afflicted. Perhaps one of the most important

objects to be attained in the management of paralytic limbs is the proper adjustment of antagonising muscular power, so as to avoid as much as possible all undue pressure not only upon the limbs, but also to prevent the pressure of the limbs themselves upon the organs lying contiguous to them.

This observation has occurred to me in consequence of some hints I have obtained from a gentleman with whom I have the pleasure of being acquainted, who has himself been a sufferer for many years from an attack of hemiplegia affecting his right side.

This gentleman, who possesses a remarkably clear and intelligent mind, served for a considerable period in the army, and ultimately left it with a constitution apparently unimpaired; but twelve years ago he was struck down by the disease, from the effects of which he has suffered ever since. He has always been able to get about, but his right leg has ever since *dragged*, and his right arm has been almost useless, while his trunk has given very perceptibly to one side.

After losing sight of him for some months, I met him again, looking very much better in health and strength. His aspect was more healthy, his body more upright, and his locomotive powers decidedly greater than they had been. On my congratulating him on this improvement, he thankfully admitted the fact, and attributed it entirely to some mechanical contrivances which he had himself invented, and applied to his own relief. He afterwards favoured me with a memorandum on the subject; and, as I think it probable that the same appliances may be found beneficial in other cases, I am induced (at my friend's desire, indeed,) to place an abstract of his communication before the profession, hoping that the plan he has found so useful may receive a more extensive trial. He says:—

"It is now nearly thirteen years since I was attacked with paralysis. After being under medical treatment for about a fortnight, I was so far recovered as to be able to be carried into the sitting-room. Gradually my general health has been much restored, but I have ever since remained a cripple. From the effects of the attack my right arm was so tightly pressed against my chest that I could not pass a towel between them unless I was in the recum-

bent posture. My right hand was fixed and turned inward. My right leg was also much enfeebled, and failed especially at the ankle. This limb also had a decided tendency to turn inward. As regards my own sensations, I should compare the effect on my limbs to have been as if a heated iron had been passed down one side of a bundle of elastic membranes or tendons, of which a portion was scorched and carried inward, and then became shorter, whilst the remainder had continued intact."

"I soon perceived the necessity of taking the weight of the paralysed arm (which in certain positions was truly distressing) off the hip. This I effected by means of a strap of gum-elastic, which was fixed to a button on the left or sound side, passing over the shoulder and across the back to the right hand. This contrivance succeeded to a certain degree. After the lapse of several years I stumbled on a pamphlet in which the effect of cushions in curing distortions was mentioned. I immediately tried the experiment by stuffing (while in bed) a pillow between my paralysed arm and chest. The effect was instantaneous. I felt as if a stream of blood were pouring in under the arm-pit. My voice, also, of which certain tones were affected by the pressure of the limb upon the chest, was instantaneously relieved, and the result altogether was so extraordinary, that my feelings of gratitude to the Almighty overflowed in tears.

"I further experimented by placing a small pillow between my thighs: the effect of this was to obviate in a great degree the tendency of the limb to turn inward. I next endeavoured to arrange my cushions in such a manner as would enable me to receive the same advantage by day which I now enjoyed only by night; and after considerable trouble, and many futile experiments, I managed to fix them upon the paralysed limbs. The effect was successful beyond my expectations.

"The cushion for the arm I made about ten inches in length by nine in breadth, with straps and buttons for attaching it to the limb. It was buttoned on the inside of the arm, so that the upper part should serve as a support, and prevent any undue pressure upon the chest; while the lower end, of suitable thickness, was held in its place by the band of the elbow-joint.

"By a continued use of this cushion

the arm has been supported, and the external muscles of the shoulder have gradually and partially resumed their original conditions, and my whole trunk is considerably straighter.

"The cushion for the thigh is made of similar materials, and is about eight inches square. It has two gum-elastic straps passing from opposite transverse corners. The upper strap is made fast to the button of my drawers in front, while the lower one passes round and behind the thigh, and is attached to a loop on the drawers, about four inches from the bottom to which the other strap is made fast. The cushion thus loosely attached fills up the space occasioned by the shrinking of the muscles at the upper and inner part of the thigh.

"After twelve years it is hopeless to expect a perfect recovery, but the improvement in the powers of my paralysed limbs since adopting these appliances, in July last (for it was not until then that the mode of attaching the cushions occurred to me), is so great that I can stand and converse for a considerable time without pain or distress, which I had not previously been able to do since my first attack.

"My experience leads me to the conclusions—1st, that the effects of paralysis may be materially alleviated by taking care that no undue pressure shall be exerted on or by the limbs or contiguous organs; 2d, that great relief may be obtained by means of cushions applied to the inside of the paralysed limbs; 3d, that it is essential that they should be placed *as high as possible*, as it will probably be found that the higher they are, the more effectual they will be; 4th, that it is extremely important to keep the paralysed limbs as nearly as possible in their natural position, both by night and by day; and 5th, that the mode of treatment which I have found so effectual in my own case, should be adopted as soon as may be, so that the antagonising muscles may be called into action as little as possible, and that the impaired muscular apparatus of the limb may be brought into something like regular use again, before it accommodates itself to these new conditions in which it is placed."

It is not my intention to offer any further remark upon the use of these cushions, neither do I attempt to explain their *modus operandi*; but I think that

the plan suggested is well worthy of further trial, and for this reason, having mentioned it to several friends who have unusual opportunities of treating paralytic cases, I place it before the profession, hoping, as I said before, that others also may be led to test its practical value.

A CONTRIBUTION TO
THE DIAGNOSIS OF CROUP,
AND CERTAIN ALLIED AFFECTIONS OF
THE RESPIRATORY ORGANS.

By W. B. KESTVEN, M.R.C.S.

THE writer has often, more especially in the earlier years of his professional life, been perplexed to distinguish between true *Croup* and the allied affections. Not having met with many examples of the disease during his attendance at the hospitals, he at that time naturally sought information from systematic authors of the greatest repute; but he failed to find that assistance which he expected, to enable him to form his diagnosis of a disease said to be frequently met with, and of an alarming character. He has subsequently had considerable experience of this disease in his own children, as well as among his patients, and from reflecting on his own observations, and from comparison of these with the phenomena of croup, as met with in books, he is convinced that the name is employed to designate affections which have not been discriminated with sufficient accuracy. He has therefore been induced to give his attentive consideration to the *diagnosis* of croup, as the only sound basis on which to rest its treatment, or that of the allied disease with which he believes it to have been confounded.

That the writer is not alone in this opinion, may be seen from the remarks of the very learned Dr. Adams, in his edition of the works of Hippocrates.* "In my opinion," says Dr. Adams, "the term *croup* is now used in a vague sense, being applied to cases of angina, in which the inflammation spreads down to the glottis and trachea, and also to

cases of bronchitis attended with croupy cough. I am confident that pure *cynanche trachealis*, that is to say, acute disease originating in the trachea" (larynx?) "is of very rare occurrence; at least it certainly is so in the north of Scotland."

According, however, to most authors, croup is by no means a "rare disease;" for they report their cases by scores, and even hundreds. And in order to judge of the vagueness with which this word is employed, it is only requisite to notice carefully its varied application in systematic works on medicine.

The following observations, then, are submitted by the writer, as a contribution to the establishment of the more correct diagnosis of a disease, in which, notwithstanding that so much has been said and written, there still exists great vagueness of nomenclature. It is hoped that they may contribute to the better distinction of an alarming and fatal disease, from affections of little immediate hazard to life, with which it is often complicated, and out of which also it not unfrequently arises.

That there exists a need for correct diagnosis in this case, let the urgency for more efficient remedial measures be testified in the returns of the deaths from croup, published by the Registrar-General.

The reports of the causes of death contain statistical facts which should constitute valuable professional documents: their compilation is presided over by an eminent medical statistician, and their elements are supposed to be the certificates of medical men. But that these last are too often inaccurate, we think will be evident from a consideration of the number of deaths reported from croup, laryngitis, and convulsions during eight years.

The following table is compiled from the Returns of the Registrar-General, for eight years, 1840 to 1847, both years inclusive, and gives the mortality from croup and laryngitis, in the metropolitan districts, in the four quarters of each year.

The whole number of fatal cases of croup in these eight years was 3032; of laryngitis, 565.

There is no distinct registry of cases of *tracheitis*: it is therefore clear that the deaths, if any, from this disease are included in either one or the other of the above categories.*

* The genuine works of Hippocrates, edited by Dr. Adams, published by the Sydenham Society, vol. i. p. 65; also, the works of Paulus Aegineta, by the same editor; Sydenham Society, Book iii. sect. 26-27.

	1st Quarter. Jan.—March	2d Quarter. April—June.	3d Quarter. July—Aug.	4th Quarter. Sept.—Dec.	Yearly totals.
1840.					
Croup	96	96	90	102	384
Laryngitis	5	9	3	9	27
1841.					
Croup	96	103	72	128	399
Laryngitis	7	9	5	6	27
1842.					
Croup	133	126	92	112	463
Laryngitis	5	3	6	6	20
1843.					
Croup	110	89	76	127	402
Laryngitis	9	11	10	14	44
1844.					
Croup	107	126	76	102	411
Laryngitis	9	17	7	17	50
1845.					
Croup	112	83	75	82	352
Laryngitis	23	12	17	27	79
1846.					
Croup	79	67	66	65	277
Laryngitis	35	28	25	33	121
1847.					
Croup	67	50	62	116	295
Laryngitis	62	47	28	71	208
Quarterly { Croup	830	740	608	854	
{ Laryngitis	155	136	91	183	

The preceding table points out the greater frequency of croup during the winter months, and also the occasional greater prevalence of this disease in some years than others. At the same time, a remarkable feature must be noticed: cases of laryngitis have increased through the last half of the period in greater proportion than croup. It is not easy to point out the exact connection this may have with that epidemic constitution which produced the influenza of 1847. It was during that period that the writer met with a large number of cases of *tracheitis* and *croup* among children.

The Registrar's report for the eight years as above tabulated, does not indicate the ages of the fatal cases; but the more recent weekly returns contain three columns for the respective ages under fifteen years, from fifteen to years, and from sixty years upwards.

On consulting the returns for the last eleven weeks,* a period embracing that of the average highest registered mortality from *croup*, we find, that of seventy-one fatal cases, not one occurred above fifteen years of age; while of forty-three deaths from laryngitis, reported during the same period, thirty-nine are returned under fifteen years of age.

During this period, also, we find four hundred and seven deaths from *convulsions* reported. Of these, four hundred and three occurred under fifteen years of age: but in reference to this category it must be observed that there is no return under the head of laryngismus: the deaths, therefore, which have occurred from this disease are to be included among one or other of the three preceding classes, most probably the

Great thanks are doubtless due to the Registrar-General for the pains bestowed upon the reports which emanate from his office, and for the readiness with which they are furnished to members of the medical profession; but it is obvious that much greater precision is demanded in a pathological point of view before they can attain their full value. This precision, however, must be the work of the profession, and not of the Registrars.

Thus the name croup has, as before remarked, been most vaguely employed. We believe that it has been made to embrace cases of laryngitis, laryngismus, and tracheitis; diseases differing in their history, progress, symptoms, or seat, and which it is most desirable should be accurately distinguished one from the other. Thus, laryngitis is confessedly a disease to which adults rather than children are prone; but yet we find forty-three deaths reported from that disease during the last eleven weeks, of which thirty-nine are returned as having occurred under fifteen years of age; while tracheitis, a disease to which children manifest a special proclivity, has no place in the registry. Now it is quite obvious that some error must exist in these returns. And this error we believe will be found to originate in the loose and indefinite application of a name. We cannot, therefore, concur in the opinion expressed by Dr. Churchill,* that the ordinary name croup is to be preferred to any of its synonyma, merely because it is generally intelligible, and as conveying no pathological opinion. It is precisely to this indefinite employment of the word that we trace incorrectness in the diagnosis of the disease. We do not desire the introduction of a new term, but we desire, as indispensable, a definite application of one that is sanctioned by long usage, and which might by strict limitation be made to convey a pathological meaning. Pathology is as much the basis of correct diagnosis and of scientific medicine, as anatomy is the foundation of physiology: without it the practice of medicine can never be rescued from the empiricism which long obscured it, and retarded its progress; and in no department more than in that of the diseases of children.

The examination of the definitions of various authors will, we think, bear us out in the assertion that these exhibit

that want of precision to which allusion has already been made.

Laennec* describes croup as "an inflammation of the mucous membrane of the air-passages, with exudation of coagulable lymph, which becoming concrete at the very moment of its formation, lines the inner surface of this membrane to a greater or less extent."

There is nothing in this definition to exclude tracheitis, bronchitis, or even pneumonia.

Dr. Elliottson† thus describes croup—"Acute inflammation of a very violent description, when it attacks the larger portion of the air-tubes in children, is situated, for the most part, lower down than when it occurs in adults. . . . Laryngitis is the disease of adults; and the disease of children corresponding to this is croup, cynanche trachealis, or more properly tracheitis."

With every deference for so high an authority as that of Dr. Elliottson's Lectures, delivered at the University of London many years since, we submit that the above definition includes almost every inflammation of the organs of respiration except croup. The essential nature and inherent peril of croup is the rapid and inflammatory tumefaction and deposition on the glottis, and the consequent spasmodic occlusion of the rima, whereby the access of air is impeded. So that, instead of the seat of the disease in croup being low down, where it would be comparatively harmless, it is, to a lamentable certainty, too high up. It is unquestionably true that the tracheitis, which of itself constitutes a comparatively innocuous *croupy cough*, may extend to the larynx, and the genuine croup be thereby induced. But the original distinctness of the two diseases constitutes the essential point in diagnosis, as it is of the utmost importance in reference to treatment. We very much doubt, also, that laryngitis can be strictly called the disease of adults: the returns of the Registrar-General confirm our opinion to the contrary, formed from the observation of simple laryngitis, unattended with spasmodic action, in many instances among children, as well as the consideration that laryngitis is an essential element of croup. The diagnosis in this case is

* *Treatise on Diseases of the Chest*, translated by John Forbes, M.D., London, 1824, p. 113.

† *Lectures on Practice of Medicine*, edited by Drs. Cooke and Thompson, 1839, p. 472.

* *Diseases of Children*, Lond. 1859, p. 229.

no less important as regards treatment than in the former case. The laryngitis in the milder cases of which we speak has generally accompanied or followed tracheitis, and is as tractable in its uncomplicated condition as is the latter disease; which is the very reverse of what must be said of true croup.

Drs. Maunsell and Evanson* are not more definite when they thus write—"Croup is an inflammation of the mucous membrane of the larynx, trachea, and bronchial tubes, usually ending in the formation of a membranous deposit upon the internal surface of these parts."

This description is equally applicable to that peculiar form of bronchitis in which membranous casts or moulds of the trachea and bronchial tubes are described by some authors as having been expectorated.

Dr. Copland's† definition of croup is, "an inflammation of the trachea, sometimes of the larynx and trachea, and also frequently extending to the large bronchi, occasioning albuminous and membranous exudation; more or less spasms of these parts."

This explanation conveys only very remotely an explanation of the fact that the fatality of croup depends on spasm of the muscles of the larynx; for aught that herein appears, spasm of the muscles of the trachea and bronchi is equally fatal—indeed, more so as regards the trachea—as the latter is pointed out as the essential seat of the disease. It need scarcely be observed that this definition is so far incomplete and inaccurate.

Dr. West, in his Lectures,‡ observes, in reference to the pathology of croup, "that though an inflammatory disease (of the larynx, or trachea, or of both) it is not without a very evident spasmodic element in very many cases; so that it may be very appropriately placed as a sort of transition between the inflammatory and the spasmodic diseases of the respiratory organs."

An attentive examination of this definition also fails to detect that accuracy which might justly be look for in an author of Dr. West's celebrity, and on a subject so important in itself. To say that a spasmodic disease may be situated in a part of vital importance,

or in one not immediately essential to the carrying on of vital processes, and yet that this same spasmodic disease may be one of danger to life, is leaving the subject in a very undesirable state of uncertainty.

Dr. Cheyne,* whom almost all modern authors have followed, describes croup as an inflammation of the air-passages: larynx, trachea, and bronchial tubes.

Dr. Churchill† gives, to our apprehension, the most accurate definition of croup that we have met with. This author remarks—"Croup consists essentially in inflammation of the larynx and trachea primarily, but which may occupy a greater extent of the respiratory organs, accompanied by a pellicular secretion, with a certain amount of spasmodic action."

We here notice that Dr. Churchill gives this disease a location nearer to its true and proper seat than either of the preceding writers. We dissent from the learned author in not regarding the concurrent or subsequent extension of the inflammation to other portions of the respiratory organs as part of the disease, but as so many complications influencing both the diagnosis and the prognosis, and with regard to the seat or spasm.

In thus freely scrutinising, and attempting to controvert, the definitions of croup given by authors of such renown as those from whom we have here quoted, we shall doubtless incur the charge of presumption and temerity. But we may urge in extenuation, besides the motives of our remarks already given, that it has seemed to us that authors have contented themselves with adopting in succession the definitions of their predecessors, instead of examining for themselves the terms thereof.

The writer would submit the following propositions, as containing the pathognomonic and diagnostic distinctions between croup and those diseases with which it is nearly allied:—

1. *True croup* consists in inflammation of the mucous membrane of the *larynx* alone, concurrently with, or giving rise to, spasmodic action of its muscles.

2. *Laryngismus* consists in convulsive action of the muscles of the larynx alone

* Practical Treatise on the Management and Diseases of Children, 2d Edition, p. 316.

† Dict. Practical Medicine—art. Croup.

‡ Med. Gaz. N.S. vol. vi. p. 45.

* Cyclopædia of Practical Medicine.

† Diseases of Children, London, 1850, p. 228. !

primarily, other muscles of the respiration becoming implicated *secondarily*, but unattended with inflammation.

3. Laryngitis, or inflammation of the mucous membrane of the *larynx alone*, without the spasmodic action of croup, is rarely met with in children, except as an occasional extension of tracheitis, or of inflammation of the pharynx.

4. Tracheitis, or inflammation of the mucous membrane of the trachea, is the pathological condition giving rise to what is known as *croupy cough*.

It will only be necessary to the purpose in hand that these several propositions be compared with the definitions of croup given above from various authors. Having submitted certain propositions, based on the pathological lesions observed in fatal cases, it is the writer's duty to test them by a brief reference to the pathology and semeiology of the four forms of disease before mentioned. It will not be requisite to enter into a minute detail of symptoms which are familiar to all. Those features only which constitute diagnostic characters need be adduced on the present occasion.

1. *Croup*.—In the true form of this disease the patient is suddenly, perhaps without any, or it may be with very brief, premonitory symptoms, placed in urgent peril of his life. The respiration is impeded; laborious and convulsive inspiratory and expiratory efforts are attended with a loud harsh grating or sibilant noise, and with the greatest distress. This distress is further increased by violent coughing, in which all impediments to breathing are still further augmented by the spasmodic action of the muscles of the larynx.

Here every symptom points to the rima glottidis as the seat of those morbid processes by which life is placed in jeopardy, and by which, if not speedily arrested, life is surely extinguished in a few hours. After death, the lesion in these fatally rapid cases is found, as indicated during life, within the limits of the larynx, and chiefly on the glottis, which is found swollen and covered with tenacious mucous or fibrinous exudation. Such are, for the most part, the pathological appearances observed in death from sudden, or rapidly fatal, attacks of croup. When the premonitory symptoms of *catarrhal tracheitis* have preceded, as is fortunately the case in the majority of instances, the phe-

nomena of inflammation will be met with also in the mucous membrane of that tube; but in the former instances the trachea is free from these morbid changes, and in the latter these are secondary. The existence or non-existence of the premonitory tracheitis, with the degree of rapidity which marks the course of the disease, and the greater or less urgency of the spasms, are the differences on which the various divisions of the disease have been based. But in all these cases, and under all these minor variations, the *extension of the inflammatory appearances beyond the larynx form the exception*, and not the rule, as is stated by many of the authors from whom the writer has quoted, as well as by others whom he has not quoted, only because it would have been a needless extension of this communication, and therefore a trespass committed upon the valuable space of the pages of the MEDICAL GAZETTE.

2. The second proposition refers to laryngismus only so far as it is distantly related to croup by its spasmodic character. Spasm has already been mentioned as constituting a most important element of croup, and it is owing to this feature that laryngismus, an entirely spasmodic disease, has been mistaken for it. There is little doubt but that in the statistical report of the Registrar-General a large number of deaths reported from croup have occurred, in truth, from laryngismus. If further countenance were required for this opinion, it might be found in the names applied by some writers to spasm of the glottis—*e. g.* "false croup," "cerebral croup," and "spasmodic croup;"—names the most inappropriate, inasmuch as it has no single feature in common with croup, beyond that it is a spasmodic disease. This very feature, however, should serve as diagnostic, since in laryngismus the dyspnoea and crowing sound accompanies inspiration only, while the harsh rough sawing noises and dyspnoea of croup attend both inspiration and expiration. Laryngismus is not accompanied by cough or febrile symptoms, which are an invariable accompaniment of croup. In short, the manner and duration of the paroxysm altogether differ in the two diseases.

3. *Pure laryngitis*, uncomplicated with croup or other affections of the air-passages, is undoubtedly a rare disease in childhood: we are therefore inclined

to attribute many of the deaths reported by the Registrar-General under fifteen years of age, as from *laryngitis*, to *tracheitis* or *croup*, or laryngismus. That laryngitis does sometimes occur as a complication of eruptive fevers is known to every practitioner. The pathological lesions found in this form of disease have many features in common with those of croup, but the spasmodic element is wanting; and the exudation of plastic lymph on the cordæ vocales is not met with to the same extent, nor is it so rapidly effused.

4. *Tracheitis* is the form of inflammation of the air-tubes which the writer believes has most frequently been mis-called *croup*. It is a common affection in children, and to it must be referred the symptoms which by most authors are assigned to certain modifications of croup. There occur daily a large number of cases which are wrongly designated *croup*, but to which the name *croupy-cough*, or *tracheitis*, is alone appropriate.

The symptoms are usually catarrhal for a period varying from a few hours to several days before the peculiar croupy sound is heard. This symptom is often overlooked, however, at the first; and it is not uncommon to hear children with a loud, harsh, croupy cough entirely unheeded. The parents or friends (sometimes even medical) will urge, in answer to your warning that the case may possibly become converted into one of fatally rapid croup, that it is "only a cold," "that the child has often had it," or that "it has lasted several days, and will soon pass off."

In *tracheitis* the hoarse harsh sound which is known as *croupy cough* is very distinct from the characteristic spasmodic dyspnoea and coughing which accompany croup. The distinct croupy *respiration* is rarely present, and when heard is dependent only on a slight extension of the inflammatory congestion from the trachea; but, at the same time, it must not be forgotten that this swollen or oedematous state of the glottis thus induced may, at very short notice, become acute and urgent *true croup*. Until, however, that degree of extension takes place, the two diseases are distinct, and often remain so for many weeks. As simple *tracheitis*, the inflammation is unattended with immediate hazard to life; but the patient, as before observed, is not safe from *croup*,

and hence the importance of the diagnosis.

The writer considers that the preceding examination of the pathology and semeiology of croup, laryngismus, laryngitis, and *tracheitis*, has been sufficiently close for the purpose of his observations, which has been to point out more closely the *diagnosis* of croup. In the course of these remarks the varieties, divisions, and subdivisions of systematic authors have been passed over, as explained by the distinctions which the writer has endeavoured to show to exist between diseases really different, but which, having been regarded as identical, it has been needful to divide and subdivide with a refinement not met with at the bed-side.

The present communication does not embrace the consideration of other points in the history of croup; as its causes, progress, complications, prognosis, treatment, &c. It therefore terminates with the following conclusions:—

1. True croup consists in inflammation of the larynx, with spasmodic action of its muscles.

2 This inflammation may terminate fatally, by obstruction to respiration, either from spasm of the muscles, tumefaction of the mucous membrane of the glottis, or from the deposition of plastic lymph on that membrane.

3. True croup is distinct from *tracheitis*, with which, however, it may be complicated, or from an extension of which it may arise, and with which it is generally confounded.

4. Croup is readily distinguishable from laryngismus, whooping cough, or any other purely spasmodic affection of the respiratory organs.

5. Croup is distinct from simple laryngitis.

6. *Tracheitis*, or croupy cough, is distinct from croup, for which, however, it is often mistaken.

7. *Tracheitis* is often converted into croup by extension of the inflammation.

8. The definitions of most authors fail to point out the pathognomonic characters of *croup*; and hence much confusion has been introduced into the history and classification of this and allied diseases.

Jan. 18, 1850.

MEDICAL GAZETTE.

FRIDAY, MARCH 29, 1850.

THE case of OZANNE *versus* DE LISLE, which formed the subject of a recent trial in the Royal Court of Guernsey, presents many points of interest to medical practitioners. Directly, it involves the simple question of slander; indirectly, the character and conduct of homœopaths, and, to a certain extent, the merits of that rickety pseudo-science by the aid of which they profess to cure all human diseases.

It appeared from the evidence that a Mr. W. R. Wakley was taken suddenly ill, and the case was considered to be so urgent by the parents of the patient, that, although messages had been dispatched to Dr. Magrath, the usual medical attendant of the family, and Dr. Ozanne, the homœopathist, who had been occasionally consulted, Mrs. Wakley called in the assistance of the defendant, Dr. De Lisle, who happened to be passing. He was conducted to the bedroom of the patient, who, as one of the witnesses in the case, gave the following account of the altercation between his two medical attendants:—

"Mr. William Robert Wakley was taken ill about eleven o'clock on the 24th of August. The doctors were sent for. Dr. De Lisle arrived first, and felt witness's pulse. Then Dr. Ozanne came in, when Dr. De Lisle said, 'one of us must leave.' Dr. Ozanne said, 'why will you not meet me?' to which Dr. De Lisle replied, 'you are an impostor and a quack, and I will not meet you.' Was quite certain as to the words 'impostor' and 'quack.' When the doctors were having those words, witness said that was not a place for disputing, on which Dr. Ozanne left."

This statement was corroborated by the evidence of Mr. and Mrs. Wakley.

The counsel for the plaintiff pro-

duced a document which he said was a diploma granted to Dr. Ozanne by the University of Paris; but an objection was taken to the reception of this document, because it afforded no legal proof of the plaintiff's qualification as a physician. It was ultimately decided by the Court that the diploma was not admissible as evidence.

In the defence it was proved by several witnesses that Dr. Ozanne practised homœopathy, and that he had publicly associated himself with a "Guernsey Homœopathic Medical Institute." The remainder of the evidence was of an allopathic character, and went to show the current opinions of the profession of Guernsey on the heterodoxy of Dr. Ozanne. We subjoin an extract:—

"Dr. MAGRATH believed Dr. Ozanne practised homœopathy. There was no chair of homœopathy in any college or university in England, Scotland, or Ireland. The system was not required to be studied by the pupils of any college or university in the British islands. No student in those institutions was subject to examination in homœopathy. No diploma or license from any of such institutions warranted the practice of homœopathy. The oath a student took forbade the practice of that system. The faculties of medicine in England, Scotland, or Ireland, did not consider the practice of homœopathy legitimate. Believed the practice was equally proscribed by the French schools, because it had been tested by authority in France, had failed, and had been condemned. He decidedly considered that homœopathy was *quackery, imposture, and delusion*—a delusion which was practised on the patient, as in submitting to it he was deceived with the false belief that it might do him good. Considered homœopathy unprofessional. Witness would not professionally meet a homœopathic practitioner. *No professional man could honestly practise homœopathy.* Homœopathy and allopathy were incompatible. They were exactly the reverse the one of the other. They were founded on totally different principles.

"*Cross-examined.*—Had not practised in France or Germany. Had read some books on the subject of homœopathy. Did not approve of the practice. Was acquainted with the plan of medical education at Edinburgh. Dr. Henderson had been a man of eminence, but had fallen. Believed he had been professor of medicine in the University, but did not know whether he was so still. The British and Foreign Medical Review was a respectable publication. Dr. Forbes, the editor, was a man of eminence in the profession. Had studied some works on homœopathy—Hahnemann's and Cuzie's. Had also read various articles on the subject in periodicals. Formed his opinion on the subject of homœopathy from the maxim that "from nothing comes nothing." Homœopaths, if honest, cannot produce any appreciable effects from the doses they gave. Had never seen the practice of homœopathy, but had met with persons under treatment. Never would have anything to do with it. His opinion was not founded on what he had read.

"The BAILIFF.—Is the Court expected to come to any conclusions on homœopathy?"

"The COMPTROLLER.—Certainly not. I am perfectly willing to exclude it.

"*Cross-examination continued.*—Was a surgeon in the Royal Navy. Practitioners of homœopathy were not admitted into the army, navy, or workhouses. The Poor-Law Commissioners put their veto on them.

"Dr. HOSKINS deposed that there was no chair of homœopathy in any British university or college. The students in those institutions were not examined in the system. It formed no part of their examinations. Considered homœopathy illegitimate practice. Most certainly considered the practice of homœopathy imposture and quackery.

"The BAILIFF said that opinions on homœopathy could not influence the decision of the Court in the case before them.

"Mr. TUPPER desired to show the opinions which were entertained by the profession.

"*Examination continued.*—Allopathists

and homœopaths could not meet for consultation, the one system being founded on science, the other not being founded on any science that was ever invented. Witness had several times told Dr. Osanne that he could not meet him. Dr. Osanne had frequently requested him to meet him, but he had always refused. Had not refused Dr. Osanne more than he would any other homœopathist.

"*Cross-examination.*—His opinions on homœopathy were founded on many years of reading and experiment. Had spent years in examining the various branches of natural philosophy. He had conversed with the first men in London on the subject of homœopathy. Had never witnessed the practice of the system. Had derived his knowledge of it partly from books, and partly by having practised it by way of trial on several patients. Mentioned the case of a lady who had taken a globule of starch, and who afterwards declared herself free from pain, but rather weaker than she was before. (Laughter.)

"By the BAILIFF.—Is the homœopathic medicine a quack medicine? Yes; although it might be difficult to define exactly what were quack medicines.—Are *Holloway's pills* a quack medicine? (Laughter.) Yes; but they contain certain medicaments.—Are *Holloway's pills* prescribed by the faculty? No.—Is *James's powder* a quack medicine? No: its composition is a secret, but we prescribe it.—*Dover's powders*? They are not a quack medicine; they are constantly prescribed.

"Dr. COLLENETTE considered homœopathy to be quackery and imposture.—*Cross-examined*: Had not seen homœopathy practised, but had read the standard works of its professors, and he founded his opinion on these. Their remedies contained nothing at all. The remedy for cholera was the placing of a piece of copper or a grain of salt upon the breast. Had studied medicine in Paris in 1834 and 1835.

decidedly of opinion
quackery and imposture
it.

"Dr. SMITH, surgeon of the dépôt of the 16th Regiment, and Member of the Royal Colleges of Surgeons of London and Aberdeen, was not in practice in this island. Considered homœopathy to be *quackery and imposture*. Dr. Ozanne had given a certificate to an officer in this island, which witness had refused to countersign, as it would not have been received at headquarters, in consequence of Dr. Ozanne not having added to his signature the place where he obtained his diploma.—*Cross-examined*: Had not seen the practice of homœopathy. Had read a little on the subject. Had studied at Edinburgh. Did not hear of Dr. Henderson when he was there.

Dr. TRANTER decidedly considered homœopathy to be quackery and imposture. *Cross-examined*: Would be very sorry to practice homœopathy, but had seen a great many persons who had been treated on that system.

"Dr. MANSSELL also held homœopathy to be quackery and imposture.—*Cross-examined*: Had never practised it, but had read the works of the homœopaths. If their system was true, all that he learnt was false."

The counsel for Dr. De Lisle made an able defence, in which he quoted passages from well-known works and journals, including the *MEDICAL GAZETTE*, tending to show that the system of homœopathy was nothing more than imposture and delusion, and that, when its doctrines are seriously examined, they involve self-evident absurdities. One of the points upon which he especially relied was that the plaintiff had failed in proving his qualification as a *physician*, and that he could not therefore claim damages for having been injured in a character which did not legally appertain to him. The learned gentleman observed—

"It was essential that a medical man who sued in that quality should prove his right to assume it. He must give positive proof that he had been regularly received as a physician; for the words charged in

the action *would not be libellous if addressed to a person who was not a regularly admitted practitioner*. It would, for instance, be no libel to apply such words to himself (Mr. Tupper) if he undertook to practise medicine. Any unqualified person, in fact, who chose to amuse himself by giving medicine, might, without being libelled, be termed an impostor and a quack. The person so designated must prove that he was a regularly admitted medical man, or his action for libel would fall to the ground; and this proof must be given by the production of his diploma or certificate, authenticated in the manner which the law prescribed, as he had already shown by *Phillips on Evidence*. Such proof was certainly wanting in the present case. But it would be said *that the act of this Court, by which the plaintiff had been licensed to practise in this island, was sufficient evidence of his right to take the quality of a regular medical man*. This act, however, *was not a diploma*. The act had been granted in the case of the plaintiff, as in other cases, as a matter of course."

This, however, turned out to be the weak part of the defendant's case. The Act of the Court, without reference to the proof of the diploma, gave the plaintiff that legal status in Guernsey, under which he might claim damages for having been slandered in his professional character. It was so found by the jurats, under the direction of the judge, and Dr. De Lisle was sentenced to pay £5 damages to the plaintiff, an *écu* to the Queen, and the costs of the action.

The legal grounds upon which this verdict was returned cannot admit of dispute; but the damage inflicted on the plaintiff was deservedly estimated at a very small amount. The jurats probably considered that homœopathy is a system of delusion and imposture, but that a man who adopts it after having been *legally* admitted to practise, cannot be called a quack or impostor without rendering the party

using these words liable to an action for slander. The same result would have followed in this country; for it is actionable to call a physician or legalized medical practitioner "a quack," in whatever capacity he may practise. The only difference is that the Act of the Court of Guernsey confers that privilege which is here derived exclusively from the possession of a diploma or license.

With this view of the law we must not suppose that homœopathy was really on its trial in this action. The judge remarked, in summing up,—

"A cloud of witnesses and a great number of books had been produced, whereby it was proved that the general opinion of the medical profession was that homœopathy was quackery. But that was a question with which a Court of Justice could have nothing to do; at least it could only be considered by the Court as bearing on the question of justification. Had Dr. De Lisle confined himself to saying that homœopathy was quackery, and not applied the terms "quack" and "impostor" personally to the homœopathist, he would not have been liable to an action. The justification sought to be established by the evidence was confined to the condemnation of homœopathy; but no justification was given for the personal application of the words used."

Further, the learned functionary points out in the following words the clear legal distinction between slanderous words used to a man, and the perhaps just condemnation of the system by which he successfully deludes the public:—

"The opinion of the profession was declared to be that homœopathy was quackery; but if an individual took on himself to say that a person practising homœopathy was a quack, he made himself liable to an action unless he proved his assertion."

Members of the profession will do well to ponder on this distinction. Dr. De Lisle had probably greater occasion

to be irritated than it appears from the evidence in this case; and there is certainly nothing more galling to a well-educated practitioner than to find that a gross imposture is successfully practised on the public; but he must content himself with publicly condemning the mode of practice, and not the individual.*

Although the absurdities of homœopathy are so glaring that it requires some courage, even in a skilful lawyer, to defend them, yet we find the plaintiff's counsel adopting the hacknied theory of persecution, and attempting to aid his argument by adducing as an illustration the opposition shown to Harvey on the circulation of the blood, and to Jenner, on his introduction of vaccination! The case of that persecuted apostle of free trade, Cobden, is associated with the names of Harvey and Jenner! The learned gentleman observes:—

"He was, he confessed, surprised that gentlemen should have hazarded opinions in the way which they had that day seen at the bar. The practitioners of medicine, above all men, ought to hesitate in pronouncing positive opinions on the science they professed. That science was, more than any other, undefined in its principles. It was even at the present moment a mass of doubts and obscurities. Its professors were still walking in the dark, and so uncertain was their science that it changed from day to day. What were considered indisputable facts twenty years ago were now condemned and proscribed as errors. And yet the professors of this vague science ventured to dogmatize, and to pronounce authoritatively on the doctrines of others. This, however, had always been the case in medicine, as well as in other sciences. The regular professors of those sciences had always been found the antagonists of new

* The English law draws a very nice distinction with respect to the application of slanderous words spoken deliberately and without legal occasion. Thus, "to constitute legal slander, some precise crime must be imputed or real injury sustained. Hence it is actionable to say a man is a highwayman; but it is not so to say he is worse than a highwayman;" because in the latter case there is nothing specific or defined in the imputed character. On this showing, to say that a man is a quack is actionable, but not so to say he is worse than a quack. If, however, real injury were sustained by the use of the words, the decision might be adverse to the party using them.

truths. All great discoverers in morals and science had been treated by those who assumed to be the guardians of knowledge and truth, as impostors. Such was the case in respect to Harvey's theory of the circulation of the blood, and Jenner's theory of vaccination; and in the present day we have seen Cobden and the other great discoverers in political science treated in the same manner."

According to this argument, unless practitioners of medicine admit that *sugar of milk*, ingeniously rolled into delicate little globules, will cure all diseases, their opposition to this system of quackery and imposture is nothing less than persecution. They must submit to be denounced as the "antagonists of *new truths*," for the learned gentleman assumes that *new falsehoods* in physics are never by any chance promulgated. Further, they are bound to admit the medicinal virtues of a treecillionth of a grain of charcoal, of a billicionth of brickdust, or the efficacy of any quack medicine whatever, simply because the discoveries of Harvey and Jenner met with unmerited opposition in their day!

We beg to direct the attention of our readers to the "Brief Notes on the Indian Village Cholera," by Assistant-Surgeon Moore, of which we publish the first part in the present number. We believe we may so far anticipate the publication of the subsequent parts of the Notes, by stating that Assistant-Surgeon Moore's plan of treatment in arresting cholera consists in the local abstraction of blood from the surface of the abdomen by cupping, and by the administration of lunar caustic internally in pills, washed down by copious draughts of iced, or cold water.

We beg to direct the attention of our readers to the advertisement announcing that the Annual Dinner of the Society for Relief of Widows and Orphans of Medical Men in London and its Vicinity, will take place at the Freemasons' Tavern, on Saturday, the 6th of April.

This Society has strong claims on the attention of every member of the profession.

Articles.

On Cancerous and Cancroid Growths, By JOHN HUGHES BENNETT, M.D. &c. &c., Professor of the Institutes of Medicine, and one of the Professors of Clinical Medicine, in the University of Edinburgh. 8vo. pp. 260. Edinburgh: Sutherland and Knox. London: Simpkin, Marshall, and Co., and Highley. 1849.

THAT great diversity of opinion exists among the most distinguished pathologists, in reference to the nature and characters of cancerous growths, is a fact too well known to require further proof, and is the urgent occasion of the laborious researches which are here presented to the profession by Dr. Bennett, in a work to which we would direct our reader's especial attention, as constituting one of the most valuable contributions to practical and scientific pathology with which it has been our good fortune to meet with.

"The treatise is divided into two parts. The first is carefully restricted to a record of facts, embracing a history of the case, a description of the morbid parts, and an account of the minute structure presented by these under the microscope. . . . In the second part the author has given a systematic account of cancers, partly founded on his own observations, and partly on those of other writers, but more especially of J. Müller, G. H. W. Walshe, Lebert, Vogel, Sédillot, Bokitsanski, Engel, Gunzburgh, Bruch, and Virchow, to whose works nearly all that is known on the true structure and pathology of cancer may be said to be confined." (*Preface*.)

The author inculcates the indispensable importance of the microscope as an instrumental aid to the detection of cancer, and to this end adds a judicious caution in its use:—

"It is not the recognition by means of the microscope, of certain cells and fibres, which will enable us to assume with certainty the existence of cancer; but that their detection in particular places, and accompanying peculiar forms of growth, permit us to do so." (*Preface*.)

The first part presents us with fifty-six well selected examples of cancer and cancroid disease, every one of which is illustrated by engravings on wood, in which a faithful representation of the disease in all its varieties is given, and

from which both the student and the practitioner may learn all that want of more extended opportunity precludes them from acquiring by personal observation. We can confidently refer our readers to this work as to a museum of pathological anatomy, nearly perfect in its department. The untiring industry of the collector, the instructive and apposite details of the complete pathologist, the clear and indispensable "remarks" of the clinical professor, and last, but not least, the skilful pencil of the draughtsman, all combine to form (if we may use the expression) a portable museum to which the visitor is introduced even in the retirement of his own library, and through which he is conducted by an able curator, and which he cannot leave without the consciousness that he has gained something towards his knowledge of cancerous structure. We have one caution to give before he enters: he must make himself familiar to a certain extent with French measurements, which are employed throughout. We hope that in the next edition of this book these will be replaced by their English equivalents.

In the second part of his work the author reviews the present state of our knowledge of cancerous and canceroid growths, prefacing this part of his subject by definitions of the words "cancerous," "canceroid," and "malignant."

A strictly *cancerous* growth possesses the characters which are recorded in the account of the microscopical examination in the first observation, and for which we must refer the reader to page 8 of the work.

Canceroid growths are "those which more or less resemble them, are continually mistaken for them, and yet do not correspond with the preceding in structure." (p. 135.)

"The most accurate meaning of the term *malignant* I conceive to be the one which ascribes it to a growth having the power in itself of re-development; that is, once existing, it may spread to other tissues or organs, causing in them a disease or growth similar to itself, by a species of propagation similar to that possessed by animalcules or vegetable fungi." (p. 137.)

Dr. Bennett divides the second part of his work under the following heads:—1. Histology; 2. Chemical Composition; 3. General Anatomy; 4. General Pathology; 5. Statistics; 6. Diagnosis; 7. Prognosis; and 8. Rational Treatment.

We follow the author's arrangements—1. Histology. The several elements of the organic texture of cancerous growths, are—1. Molecules and Granules; 2. Naked Nuclei; 3. Cells of various kinds; 4. Filaments or Fibres; 5. Bloodvessels; 6. Crystals."

These the author repeatedly enforces are not of themselves characteristic of cancer, but become so from their relation to each other. Of these organic elements, the "cancer cell" is most important in relation to the present subject. We select the chief characters assigned to it by the author.

"In form it may be round, oval, caudate, spindle-shaped, oblong, square, heart-shaped, or of various indescribable forms, from pressure on its sides. The external edge is generally sharp and well-defined on the field of the microscope. In size, it varies in different specimens, from the 1-100th to the 1-10th of a millimetre ('03937 Eng. inch). The former size only occurs in a very early stage of its development; the latter, only when the cell is old, and contains other cells. It is invariably destitute of colour, except in melanotic cancer. The cell wall, when young, is smooth and distended: when old, it is more or less corrugated and flaccid. Its contents are various. There is always one nucleus, often two, and sometimes they increase in number from three to nine. Most commonly there is only one, which is round or oval, generally the latter, and contains one or two granules or nucleoli. The nucleus, like the cell itself, varies in size, and may occupy from one-sixth to four-fifths of its volume. Between the nucleus and the cell-wall there is a colourless fluid, which, at first transparent, becomes afterwards opalescent, from the presence of molecules and granules. On the addition of water the cell-wall becomes distended by endosmosis, and is enlarged. When acetic acid is added the cell-wall becomes more transparent, and in young cells is entirely dissolved; whilst the nucleus, on the other hand, either remains unaffected, or its margin becomes thicker, and its substance more or less contracted. Liqueur potassæ reduces the whole to an amorphous mass" (p. 145).

The preceding, as we have observed, embraces the characters more especially belonging to the cancer cell; but it is not the presence of these alone which can be taken to determine the nature of the growth, but its presence among certain other histological elements.

The whole of the chapter on the Histology of Cancer may be consulted with the greatest advantage by students,

from its containing also a clear description as well as illustrations of the various forms of cells, fibres, granules, &c. met with in the microscopical examination of other growths, besides those of a cancerous nature.

With regard to the chemistry of these growths, Dr. Bennett remarks:—

"Histologists are enabled, by the use of very simple agents, to separate the chemical principles of cancerous and canceroid growths into four groups,—viz. 1st, albuminous principles; 2d, fatty principles; 3d, mineral principles; 4th, pigmentary principles. Further than this they cannot go; but, fortunately, a knowledge of the relative amount of these is easily obtained, and yields very important information" (p. 162).

In the chapter on General Anatomy Dr. Bennett gives some of the divisions of cancer which have been proposed, and concurs in that of Dr. Walshe,—viz. scirrhus, or hard; encephaloma, or soft; and colloid, or jelly-like cancer; considering that these embrace all other forms spoken of.

In this section also, the author treats of the origin, growth, and degeneration of cancerous growths.

In reference to the origin of cancerous growths, we quote the following observations (p. 205):—

"Taking the products of simple inflammation (say pus) as a standard, we cannot fail to remark that whilst the cell development of tubercle is below, that of cancer is above, this standard." And—"it seems to me probable that tubercle is connected with some derangement in the function of the primary, and cancer with some derangement in the function of the secondary, digestion."

The remarks on the diagnosis and prognosis of these growths are such as might be looked for from one manifesting so extensive and profound an acquaintance with the disease as does the author. They are not merely of value relatively to the diagnosis of cancer from other morbid structures, but they are also highly instructive in regard to the positive characters and the histology of other growths.

The rational treatment of cancer Dr. Bennett treats under the three following heads: 1st, means of retardation and resolution; 2d, means of extirpation; and, 3d, means of prevention.

The first object is to be attained by the influence of cold, dryness, pressure, and locality. The second object is

gained by—1st, excision of the part; 2d, chemical agents which destroy texture. Dr. Bennett lays down this rule with regard to excision—"that so long as a cancer remains fixed in a part which is capable of being removed, and the strength of the patient is not too much reduced, so long is the surgeon warranted to interfere."

Our "means of prevention" are necessarily, from our ignorance of the causes of cancerous exudation, limited to general hygienic measures; which, if any general principle for guidance can be laid down at all, it is that these should be the contrary of those in the tubercular diathesis.

We fear we have but imperfectly expressed our opinion of this highly meritorious work. We have seldom in the course of our reading met with a book possessing more real interest, novelty, and instruction. We would compare this work, in reference to the use of the microscope in disease, with those of Laennec, Davies, or Latham, in regard to the use of the stethoscope in thoracic disease. Both instruments have effected, and are effecting, incalculable changes and improvements in medical science, while the extensive reception and employment of both has to a great extent depended on those authors who have by their writings brought them under the notice of the profession.

Dr. Bennett's work will give an impulse to microscopical researches in pathology, and will yield good fruit in contributing to an increased security of the foundations of clinical diagnosis.

OBITUARY.

On the 18th inst., at his residence, at Isleworth, William Hutchinson, Esq., M.D., fourth son of the late Captain Emanuel Hutchinson, in his 58th year.

On the 26th inst., Henry Frederic Holt, Esq., surgeon accoucheur, of No. 8, Great College Street, Westminster, in the 67th year of his age.

HARE-LIP—NURSING DURING THE PROCESS OF UNION.

Dr. J. M. WARREN had lately, in a child one month old, permitted nursing during the process of union. Three sutures were employed, and the union was perfect; and he was surprised to see, contrary to the usually received opinion, that there was no strain on the lip during the act of nursing. —*American Journal of Med. Sciences*, Jan. 1850.

The Physiognomy of Disease. By GEORGE CORFE, M.D., Resident Medical Officer at the Middlesex Hospital. 4to. pp. 151. London: Nisbet. 1849.

MANY authors indulge in prolixity in the composition of their title-pages. Dr. Corfe has erred in the opposite direction, and gives us too much *brevity*. Our readers must not suppose that the work which we here bring under their notice consists merely of a series of artistic delineations of the external expression of various diseases, as depicted in the countenance, posture, or general aspect. With these every experienced practitioner is familiar, and experience alone can give the familiarity. We have here, combined with a graphic portrait of the patient, a notice of all circumstances which, directly or indirectly, arise out of the external or of the internal morbid processes, whereby the distinctive manifestations of disease are made subservient to diagnosis.

We first extract the author's classification of what he designates "diseases in their assimilative characters," by which expression we understand those points or features which, constituting a general likeness, require to be studied with the utmost care and close clinical observation, in order to prevent diseases of very opposite nature and origin from being confounded. We must observe, however, that to this all-important end more than study is required: there is essentially that natural constitution of the mind which quickly excludes or includes phenomena, and distinguishes intuitively the differences between the signs of disease. It is by the possession of this faculty that some men practise with so much comfort to themselves and benefit to others, and thereby succeed in acquiring an eminence which the most laborious student may in vain toil to gain, though he may be the possessor of all the learning of the profession.

The author divides diseases, viewed in this aspect, into six classes, as follows:—

CLASS I.

Division 1.—Cerebral diseases in insensibility;—Countenance lethargic.

Division 2.—Cerebral asphyxia in stupor;—Countenance livid.

Division 3.—Cerebral sympathies in irrationality;—Countenance distressed.

CLASS II.

Division 1.—Thoracic derangement;—Countenance dusky.

Division 2.—Thoracic derangement;—Countenance anxious.

Division 3.—Thoracic derangement;—Countenance of peculiar hues.

CLASS III.

Division 1.—Emaciation of frame;—Countenance of peculiar hues.

Division 2.—Emaciation of frame;—Countenance of peculiar hues.

CLASS IV.

Division 1.—Abdominal seizures;—Countenance pinched.

CLASS V.

Division 1.—Enlargement of organs, glands, &c.;—Countenance, according to acute or chronic stage, harassed.

Division 2.—Enlargement of organs, &c.;—Countenance careworn.

CLASS VI.

Division 1.—Vascular diseases in excitement;—Countenance flushed.

Division 2.—Vascular diseases in atony;—Countenance languid.

Our space forbids the enumeration of the diseases by which the author fills each division. The above, however, will suffice to convey an idea of the author's views.

The volume abounds throughout with most valuable practical hints in reference to the treatment as well as the diagnosis of disease. We may instance, among others, the author's remarks on the treatment of poisoning, delirium tremens, hysteria, hepatic and uterine derangement simulating cerebral disease, &c.

We must find space, however, to notice an entirely novel aid to the diagnosis of thoracic disease, which Dr. Corfe has introduced, and which he designates *Heautophonics*, from *heauto* (self) and *φωνη* (voice). The author has constructed an instrument for its application, which he denominates an *heautophonon*.

The principle upon which this new means of diagnosis is founded may be thus briefly stated. When the ear is applied to the chest over a portion of solidified lung, the voice of the auscultator himself will be found to be more sonorous, vibrating, and louder, than when he speaks over a portion of

healthy lung. The author gives the following illustration of his object:—

"Let an individual hold a hat in his hand, and, putting his face close to the hollow, let him talk into it for three or four minutes. He should practise this ad-joining to a corner of a room where an angle is formed by two solid pieces of wainscot; and having thus talked, let him suddenly shift his head, and talk into this angle of wood, and instantly his voice falls a semitone or more."

The practical utility of *heautophonics* has been fully investigated by the author, who states also that several continental writers have been engaged in the same pursuit with equal success.

The author gives the following conclusions in reference to this subject:—

"1. That if the ear of the heautophonon is placed over a portion of a lung which is solidified, the voice of the speaker becomes more sonorous, vibrating, and more resonant.

"2. If the pleura is filled with fluid, the voice of the operator is muffled: there is less vibration of tone upon the chords vocales than under a healthy lung.

"3. If there is tubercular excavation which is nearly dry, the voice in the heautophonon rises, is shriller, sharper, more nasal, than in the first instance.

"4. In emphysema the sound is dull" (p. 77).

In a succeeding section Dr. Corfe brings forward his views on the structure of the kidney, and describes a class of vessels which he terms oil-tubes, in connection with the fat which surrounds that organ. These views were published several years ago, but have not met with general reception. The author, however, reiterates his opinions, and enters very fully into their special and relative anatomy. We observe that Dr. Corfe claims priority with regard to the discovery of fatty matter in the urine in albuminuria.

The entire work, we may add, is a very valuable contribution to diagnosis, consisting, as it does, of the results of the clinical experience of an able and quick observer, united to no mean acquaintance with the researches of the best pathologists. We could wish, while we admire the author's pious zeal, that he had not seen fit to introduce holy things into a work purely medical. Our readers will concur in the opinion, if they consult the introductory chapter,

that the religious topics there mentioned are evidently dragged into notice. For truth's own sake, we desire wisdom and prudence in its advocacy. Everything in its proper place. "Let all things be done decently and in order," said one of the first teachers of Gospel truth.

CASE OF A LARGE VESICAL CALCULUS PRESENTING AN OBSTACLE TO CHILDBIRTH—OPERATION PERFORMED DURING LABOUR.

M. MONOD related to the Chirurgical Society of Paris the particulars of the following case:—

A woman, aged forty, pregnant for the first time, had been in labour several hours; the membranes were ruptured, the pains frequent, but the labour did not advance, by reason of a large tumor on the anterior wall of the vagina. The tumor was hard to the touch, and completely filled the entrance to the vagina. From its form, position, &c., it was readily recognised as a vesical calculus. A sound, passed into the bladder with difficulty, confirmed the diagnosis.

M. Monod, finding that the operation of lithotripsy was inapplicable, at once proceeded to remove the stone by an incision into the walls of the tumor. A curved bistoury, guided by the forefinger of the left hand, was passed into the vagina, and an incision made into the tumor. The stone was removed by the finger only: it weighed nearly three ounces; its surface was irregular, and its form that of a shallow bowl.

The patient had been previously chloroformed, and, as the state of insensibility continued after the removal of the stone, the forceps were employed to complete the delivery. The child breathed, but died in a few seconds, death being attributed to the pressure of one blade of the forceps on the umbilical cord, which was twisted round the neck.

The patient recovered without an untoward symptom. The urine passed by the urethra on the following day. This M. Monod explained by supposing a swollen condition of the edges of the wound produced by the manipulation necessary for the removal of so large a calculus through an aperture so small as he had made.—*L'Union Médicale.* X

. How came one blade of the forceps on the neck? Might not the death have been owing to other causes?

Proceedings of Societies.

WESTMINSTER MEDICAL SOCIETY.

March 2, 1850.

PROFESSOR MURPHY, PRESIDENT.

Acute Synovitis of the Knee-joint, occurring in an Infant during Dentition.

THE subject of this case came under the notice of Mr. GORDON BAILEY on the 8th of January. There was great thirst, heat of head, irritable bowels, hot skin, and the usual precursors of teething. Those symptoms were succeeded by drowsiness, and a tendency to sickness of the stomach. The child was apparently very much out of health; its skin was pale and flabby; the folds between the thighs and vulvæ very much chafed, its alvine secretions were dark and fetid, and it was very irritable. The bowels were opened by small doses of mercury with chalk and rhubarb; the gums were freely divided; the head was ordered to be frequently sponged with vinegar and cold water, and the body was placed in a warm bath, and some sudorific medicine was prescribed for it. The child was relieved by this treatment, and continued to improve for a few days, when the symptoms again supervened: the gums were much swollen, and the child was very irritable. The gum lancet was again used. Small doses of sulphate of magnesia and nitrate of potash were prescribed, which had the effect of bringing away some watery stools, after which the child became more lively. On the 12th of January the left knee began to swell: it was large and white on the following day, the integuments presenting the shining appearance of phlegmasia dolens, without, however, any of the excessive degree of pain attending that affection. The child was exposed to no accident or cold, and had had great care bestowed on it by its parents and nurse. The brother of this child is also very delicate, cutting his teeth with great disturbance to the system, such as congestion of the brain, enlargement of the cervical glands, &c. The limb was ordered to be kept quiet, and to be fomented frequently with decoction of poppies, &c. The bowels were opened, and the child supported by isinglass dissolved in milk. This palliative treatment was judged most suitable from the weak state of the child, and the swelling of the knee being looked on as constitutional, having for its exciting cause the process of painful dentition in a strumous habit. Mr. Hancock, who saw this case

in consultation, also concurred in this view, and it was agreed on to procure absorption of the fluid, if possible, by the application of tincture of iodine in the neighbourhood of the joint, and also the exhibition internally of iodide of potassium. This treatment was continued for nearly a week. In the interim the child cut two teeth, when the irritation became much less: however, the limb did not appear to get small. Fluctuation became more distinct, and a red spot, at the side of the joint where the integuments were thin and soft, showed where the matter would soon escape. After being poulticed for two or three days, an incision was made at this spot, and about two ounces of pus flowed out. The discharge continued some days. The limb was placed in a moulded gutta percha splint; water dressing was substituted for the poultice, and the use of cod liver-oil commenced. The discharge ceased after seven or eight days; the four incisions came up, and, with the latter, all the restlessness and sympathetic disturbance ceased; the knee has assumed its former size and shape, and there appears to be no stiffness or impediment to motion, for the little patient flings the legs about as if nothing had occurred.

This case derives its chief interest from the fact that it occurred in so young a subject. Synovitis in young children, as a complication of dentition, is not described in any of the works on diseases of children; and Sir B. Brodie, one of the highest authorities on the subject of diseases of the joints, speaking of the inflammation which begins in the synovial membrane itself, and is not communicated to it from other textures, says, that "the disease very seldom attacks young children, but is frequent in adult persons."

NEWCASTLE AND GATESHEAD PATHOLOGICAL SOCIETY.

Dec. 13, 1849.

T. M. GREENHOW, ESQ., IN THE CHAIR.

MR. ECCLESTON exhibited the

Genito-urinary Organs of a Man who had been labouring under Spermatorrhæa.

The subject from whom the above specimen was taken was admitted into the Dunston Lodge Asylum in May 1847. He was then 25 years of age, and a stout well-made young man, of *sallow complexion*. This was the first attack of insanity, and was of recent occurrence: cause not known; is not dangerous to others, but is afraid of

doing injury to himself. He appears very dull and reserved, showing a great disinclination to enter into conversation. Has many curious delusions, amongst which is one that he should be better if he could cry, laugh, or whistle. He also states that he is much more unsettled at the moon's changes, which was, in fact, the case, but probably arose from his own feelings on the subject, and not from lunar influence. He continued alternately better and worse from the time of his admission until the beginning of February in last year, when he became perceptibly worse as regards bodily health, the slightest exertion appearing too much for him; and his temper underwent a corresponding change, — from being civil and obliging, he became fretful and irritable. This was at first attributed to some gastric derangement, and treated accordingly, but without any benefit to the patient. He was troubled with an excessive and constant thirst, which nothing appeared to alleviate. He continued in this state until the beginning of March, when, having occasion to introduce a catheter for him, his shirt and bed-clothes were observed to be much marked, and, on questioning him, he admitted that he had been for a long time past in the habit of self-abuse, but that latterly the semen had passed involuntarily, not only when at stool or in the act of micturition, but at other times also. He had no pleasurable sensation on emission, but, on the contrary, a sharp lancinating pain shooting from the perineum to the anus. Unfortunately, when this discovery was made, the patient was beyond remedial means, and he expired on the 6th of March, being worn out by the excessive discharge.

The following is an account of the post-mortem appearances, twenty-six hours after death:—

Head.—Dura mater very adherent to calvarium; arachnoid opaque and slightly thickened; substance of brain and cerebellum softer than usual; cineritious portion of brain exceedingly pale and very thin.

Thorax.—Lungs healthy; heart pale and flabby.

Abdomen.—Nothing remarkable save the kidneys: the right kidney being of a very pale colour, softened in its texture, and apparently atrophied; the left one was much larger, and at the superior margin of its tubular portion was a small abscess containing thin greenish yellow-looking pus.

Pelvic viscera.—Bladder enormously thickened, being almost an inch thick: its lining membrane presented an extremely vascular appearance, and this extended for a short distance into the ureters. Vesiculae

seminales apparently shrivelled; prostate gland of moderate size, but much congested, and not of its natural firmness to the touch. Testicles both of the ordinary size, but preternaturally pale and soft.

The Secretary, Dr. ROBINSON, related another case of spermatorrhoea which had occurred in a neighbouring asylum, and in which the discovery of the disease was also accidental. The patient, a middle-aged man, in easy circumstances, having manifested a tendency to suicide, and other symptoms of melancholia, was admitted into the asylum; but as the medical certificates described him to be also labouring under diabetes, some of his urine was obtained for examination, not, however, without a little difficulty, in consequence of the patient obstinately refusing to void any when requested to do so, and using every other means in his power to prevent it from being collected. On allowing it to stand for a few hours, there was an opaque milky deposit, which, being viewed under a microscope, was found to contain innumerable seminal animalcules. Both these cases demonstrate the importance of carefully examining the urine of men confined in asylums whenever any anomalous symptoms occur.

Mr. FRATHERSTONHAUGH related a case of

Injury of the Spine.

On the 16th Nov., 1839, J. W., aged 19, a healthy athletic young man, while working as a pitman, and in a stooping posture, was struck violently on the back by a tub of considerably size and weight, which had fallen from a great height; and in consequence of the injury thus sustained he was at once deprived of the use of his limbs, and was conveyed home in a helpless condition. On examination, great tumefaction was found over the dorsal region, notwithstanding which the spinous processes of three of the dorsal vertebrae could be felt projecting out of the line. There was complete paralysis below the injury, loss of sensibility and motion in the lower extremities, inability to void urine, involuntary passage of the faeces, and there was great distension of the abdomen. The catheter was introduced daily for nine weeks: at the expiration of the first three weeks of that period, however, the bladder began to resume its function partially, and he had some control over the sphincter ani. He continued in this state, with slight improvement, for five months, during which time local bleeding was resorted to, mercury administered until slight ptyalism was produced, and the bowels were occasionally acted upon by purgatives and enemata. A

seton was inserted near the fractured portion of the spine. He was then so far recovered as to allow of his being propped up in bed a little every day; he could also move the left leg slightly. After the lapse of seven months he was removed to the sea side, where he remained for some time, and regained a little use of the left leg, the right remaining quite useless. He could then move about a little on crutches with assistance; his general health was good; and having had salt water applied to the spine the right leg also gradually became more powerful. The right leg had then been useless for a year and ten months, and even at this time he could merely trail it along the ground. He continued gradually to improve, and at the expiration of three years he could walk from ten to twenty miles in a day with the aid of a stick. He has since enjoyed excellent health, and has married and had a family. The spinous processes can even now be distinctly seen projecting out of the line.

Mr. Featherstonhaugh also briefly mentioned the particulars of another case of paralysis following injury of the spine. In this instance the last cervical or first dorsal vertebra was the seat of injury; but notwithstanding the active treatment adopted the loss of power over the extremities has been persistent.

Mr. GIBB related the following case of *Fractured Spine, with subsequent Sloughing of the Bladder, and formation of an Adhesitious Membrane, taking the place of the Bladder,*

by glueing together the surrounding parts, and thus constituting a sac, into which the urine was received from the ureters, without any extravasation of urine taking place into the surrounding tissues.

The young man, aged 19, was a pitman, and whilst at work, on the 27th of September, 1849, in the sitting position, and leaning forwards, was struck on the loins by a mass of coal, which fell from the roof of the pit; he was immediately found to be paraplegic, and was attended by a surgeon, who used the catheter twice daily for the first two days; but from some mistake he neglected to call again until the morning of the 1st of October, when he found an enormous accumulation of urine, which was deeply coloured with blood: he was brought to the Newcastle Infirmary on the afternoon of the same day, and admitted under Mr. Heath, when three gills of very alkaline urine were withdrawn, of the colour of blood, and of a syrupy consistence. He was perfectly paraplegic, and from the hips downwards had no feeling; the spinous process of the first lumbar vertebra was found depressed, and that of the second

very prominent; on pressing firmly upon them, or on moving the pelvis, they were found to be slightly moveable, showing evidently that there was fracture of the spine at that part, with considerable displacement.

He was placed on Dr. Arnott's water-bed, and underwent the ordinary treatment; on the third day the urine had almost lost its blood-red colour, was very ammoniacal and thick, and had to be frequently withdrawn, as many as three or four times during the night, so great was the distress he felt when it accumulated in the bladder. Until the twenty-fourth day after the accident the urine passed freely by the catheter, and continued, in spite of his naturally weak and scrofulous constitution, to progress almost as favourably as patients with fractures of the spine low down generally do, for the first few weeks, but from that time until the 27th no urine could be found in the bladder, and except a few teaspoonfuls of foetid purulent fluid nothing passed off by the catheter: on the 27th some very offensive purulent urine was withdrawn; he was suffering severely from hectic: had drenching perspirations, was declining very rapidly, and in the right groin the skin had put on an erysipelatous appearance, with considerably swelling extending deep into the pelvis. On the thirtieth day after the accident the skin of the groin was gangrenous, and bursting a few days afterwards continued to discharge large quantities of foetid purulent urine, until the 9th of November, when he died comatose, and completely worn out. No urine or discharge could be withdrawn by the catheter after the bursting of the abscess in the groin.

The autopsy, thirty hours after death, revealed an oblique fracture through the upper part of the body, and one of the articular processes of the second lumbar vertebra, with great displacement of the fractured portions. The body of the first lumbar vertebra, firmly adherent by the intervertebral substance to the small upper fragment of the fractured body of the second, projected forwards an inch over the lower portion, whilst the lower and greater fragment retaining the laminae and spinous process with an articular process, was projecting the same distance backward, beyond the spinous process of that of the first. The spinal canal was reduced to a very small diameter; the dura mater, torn partially across, showed the cauda equina coming from the lower part of the cord to be slightly lacerated, and the remaining part very firmly compressed betwixt the arch of the first lumbar driven forwards, and the lower fragment of the body of the second projecting backwards. There was

considerable ecchymosis of the lambar muscles, but no purulent deposit or connection with the fistulous aperture in the groin. On opening the abdomen, the scalpel, on reaching midway between the umbilicus and pubis, cut into a large cavity corresponding to that of the bladder, which contained about three gills of fetid pus and urine, and discharged its contents externally by means of the fistulous aperture open at the groin, while the urethra communicated with it from below, and the terminations of the ureters opened into it through its upper lateral boundaries. This cavity occupied the whole of the pelvis, and extended half-way up to the umbilicus. Its interior was dark, and from the sides hung some fragmentary shreds of the coats of the bladder, soft, putrid, and easily detached from the walls of the cavity. These slight remains were all that could be found of the bladder. It was replaced by a rather thick layer of adventitious membrane, which formed the walls of the cavity closing the aperture of the pelvis below, by covering the sides of the bones of the pelvis and gluing together the prostate, rectum, and surrounding parts, whilst at the upper part it formed the boundaries of the cavity by covering over and uniting together the folds of the small intestines, and those again with the abdominal walls. The prostate gland, with some muscular remains hanging from it, projected half an inch into the cavity, and a catheter passed down the urethra entered freely through it into the cavity. The fistulous aperture in the groin passed above Poupart's ligament; and, proceeding inwards through the abdominal walls, opened into the right side of it. The ureters, with the pelvis and calyces of the kidneys, were found to be greatly thickened, dilated two or three times beyond their natural size, and to contain some purulent urine, with small patches of lymph and calcareous deposit covering here and there the inner surface of the membrane. The proper substance of the kidneys was a little congested, but otherwise healthy; and the other viscera, although pale, were also healthy.

On a review of this interesting case it would appear as if the bladder had been injured by the accumulation of the urine during the time he was neglected previous to his entrance into the hospital, aided by the no less injurious influence of the ammoniacal urine, together with the severe injury and compression of the spinal chord by the fracture of the spine, and that loss of vitality, or more probably destructive inflammation of the bladder, ensued. It is remarkable that, with the loss of nervous power which the paralysis of the bladder proved to have existed in the pelvic viscera,

so perfect an adventitious sac should have been found, and the power so far to repair a loss of such magnitude in so weak a subject, and under such peculiar circumstances as regards the nervous system, cannot fail to supply some matter for thought to the physiological and pathological investigator, and infuse into the mind great confidence in the reparative powers of the body.

BRITISH ACADEMY OF MEDICINE.

Jan. 26, 1850.

On the Pathological Anatomy of Palpebral Granulations.

M. HARRISON, in a lecture on palpebral granulations, laid down these conclusions—

1. Under the generic name of *palpebral granulations* several entirely different morbid conditions are confounded.
2. This term includes all those organic alterations capable of giving a rugous aspect to the inner surface of the palpeum.
3. The study of their organization admits of the division of these granulations into vesicular, cellular-vascular, and fibrous.
4. Papillary granulations consist of the conjunctival papillae, swollen or enlarged from inflammation.
5. Vesicular granulations are a new product peculiar to the palpebrae, and without analogy in the economy. They are developed from small cysts formed in the thickness of the membrane.
6. The principal seat of engorgement is the retro-tarsal portions of the palpebral conjunctiva.
7. Cellular-vascular granulations have the aspect of small fleshy vegetations.
8. The fourth species of granulations are composed of cicatricial tissue.

M.M. HARRISON and CROSS severely criticised these conclusions of M. Harrison, and applied to them the epithet "*ophthalmologic confusion*." They adduced the observations and researches of M. Thiry, in contradiction to those of M. Harrison. M. Thiry states that the palpebral granulations are different from normal tissues, and that they are identical with those of gonorrhoea, with those seen on the cervix uteri, and with those of other mucous membranes; that in every case a contagious cause exists; that the reproduction of the principle which gave rise to them, *ad infinitum* is a uniform phenomenon, and that the ophthalmia which results is also uniform in its character, whether met with in military or civil practice, or in new-born infants.

ACADEMY OF MEDICINE, PARIS.

March 14, 1860.

PRESIDENT, M. BROCHETEAU.

Functions of the Muscles of the Nose studied by the aid of Galvanism.

An essay on this subject, by M. DUCHENNE (of Boulogne), was read. The following are the author's conclusions:—

1. The muscular fasciculi, known as the myriform muscles, the primal transverse, and primal radiate, of M. Cruveilhier, which pass from the fossa incisiva to the septum and also of the nostrils, form three distinct muscles, of which one is a depressor, and the other two are dilators, of the ala. The external of the two last retain the ala in their position.

2. The subcutaneous fibres on the back of the nose corrugate its integuments, and support the cartilages of the nostrils. They sometimes elevate, but never dilate the latter.

Mefico a Cure for Wounds.

M. ANDRÉ SAUTUENECZ, member of the legation from Bolivia, transmitted a specimen of the plant called *mefico*, which he stated possessed valuable medicinal properties, and among them more especially the capability of curing wounds.

Diseases of the Liver.

M. BEAU, candidate for the pathological section, read an essay entitled, "*Pathetic Considerations on the Liver.*" The author treated of the mode of action of certain irritant *ingesta*, such as alcohol, acids, spices, &c., which he considered as having great influence in the production of inflammation of the liver. He arrived at the conclusion that all these agents reach the liver by the portal circulation.

Substitute for Sulphuret of Arsenic as a Depilatory.

M. BOUDRY, candidate for the pharmaceutical section, read a memoir on this subject, in which he stated that sulphuret of sodium or calcium can be substituted for sulphuret of arsenic in the preparation of alkies, and that the employment of the latter should be interdicted.

Vesico-Uterine Fistula.

M. DEFAUL, in the absence of M. Jochert, presented a patient who had been operated upon for vesico-uterine fistula. The woman had been prematurely delivered by M. P. Dubois, to avoid dangers at the full time. The fistula opened into the cervix uteri. The anterior lip of the os uteri was

intact; the posterior lip was in a gangrenous state. The following operation effected a complete cure:—

1. Two incisions were made in the direction of the commissure of the cervix, extending to the seat of the fistula: the edges of the latter were cut with scissors.

2. The vagina was separated from its attachment to the cervix, anteriorly and laterally.

3. Three sutures were inserted into the vesical fissure.

ACADEMY OF SCIENCES, PARIS.

March 11, 1860.

PRESIDENT, M. POUILLET.

Apparatus to prevent the flow of Urine after the high Operation for Lithotomy.

M. HUEFELDORF submitted an apparatus to prevent the discharge of urine from the wound made in the bladder during this operation, and the extravasation of that fluid into the surrounding tissues. The contrivance consists of a caoutchouc tube, at the extremity of which a bulb can be developed by inflation. The tube being introduced through the wound, and then inflated, is to be gently drawn outwards, by which means the orifice is closed from within.

New Mode of Treating Cutaneous Inflammations.

M. ROBERT-LATOUR considers inflammation as the result of an augmentation of animal heat; and avows as the theory of M. FOURCAULT, that the access of air to the cutaneous surface is an indispensable condition of calorification.

Guided by these data, M. Robert-Latour states, that in order to control inflammation it is only requisite to arrest the development of animal heat: this object is to be gained by the exclusion of the influence of the air.

The means employed for this purpose have been the covering of the inflamed surface with a strong solution of gum, st. coh, or collodion.

M. Latour related two cases of erysipelas speedily cured by this method of treatment.

Treatment of Fistula Lachrymatis.

M. MAGNE communicated the complete cure of a case of fistula and tumor of the lachrymal sac, by the application of muriate of antimony.

Glanders in Man.

M. LEGAL (of Dieppe), transmitted the particulars of a case of glanders communicated to the human subject from a horse.

Hospital and Infirmary Reports.

FELLOWS' PRIZE REPORTS

OF
CASES OCCURRING IN UNIVERSITY
COLLEGE HOSPITAL,
SUMMER SESSION 1845.

By C. H. F. ROUTH, M.D. Lond.

CASE II.—Sarah Hicks, *æt.* 25, admitted under Dr. Thomson, Tuesday, April 29th, 1845.

CASE.—*Rheumatismus Acutus—Pericarditis—Endocarditis.* May 14—*Pneumonia?—Hysteria.* May 23.

This patient is of a moderate stature; stout conformation; nervous and sanguine temperament. Complexion ruddy. Blue eyes and dark-brown hair. By occupation a servant of all-work for the last eight years without interruption, except when ill. Is single. Accustomed to drink about Oj. porter daily. Always well fed and clad. Sleeps well in health, generally from six to eight hours. Of a cheerful disposition.

Has resided for the last week with her parents, at No. 23, St. James Street, Lisson Grove. Before this she lived for about three weeks at No. 14, Charles Street, Clarendon Square. She slept here in a back kitchen, which was very damp, with a stone floor, though imperfectly covered here and there with boards. Before this she lived in the country, in a very open and airy position. Has lived in London or in the neighbouring country, all her life.

Hereditary predisposition.—Her father is healthy, but liable to asthma. The mother has had frequently rheumatism in her shoulders. Her other relations are healthy, and not liable to rheumatism.

Habitual state of health.—She herself at different times has experienced a good deal of illness. She had small-pox, scarlatina, and pertussis, when a child. She had an attack of rheumatism and hemiplegia in 1839. In July 1841 had an abscess of the heel. This was opened; and she was so much alarmed at the operation that while stooping down to foment the foot she fell down senseless on the floor. The only premonitory symptom she had noticed was slight giddiness. While insensible she was much convulsed, foamed at the mouth, rolled her eyes, and her face was much distorted. She had repeated attacks of convulsions that and the following days. They were always followed by heavy sleep.

Under proper medical care she, however, soon got well.

On the 30th August, while crossing the street, she fell down suddenly in a state of insensibility, and was conveyed home in a cab. She was bled to $\text{ʒ} \text{vi}$.; but the bandage getting loose in the course of the day, the bleeding came on again, and she supposes she altogether lost about one and a half pounds of blood. On the following day she was admitted an in-patient under Dr. Thomson, in this hospital. The Clinical Report for 1841 has the following account of her case:—"On admission there was much pain across the forehead and temples, accompanied by morbid heat, and throbbing of the parts. Skin hot. Pulse 120; short. Tongue furred, and urine scanty, high coloured, passed with pain and difficulty. Catamenia very irregular. It had not appeared since the fits. She was ordered Calomel, gr. iv. st. sumend. haust. purgans niger post horas quatuor.

"Sept. 2d.—C. C. poni auras ad $\text{ʒ} \text{x}$.; Pulv. Artemisia, gr. x. ter die sumend.

"3d.—The head was greatly relieved by the cupping, and the bowels open. Auge Artemisia ad gr. xv.

"6th.—Head much better. No headache; no fits since. Tongue cleaner. Auge Artemisia ad $\text{ʒ} \text{j}$. s. dos.

"On the 9th she was discharged relieved."

The nurse of the ward states, moreover, she was an inmate of the hospital two years ago for some venereal complaint.

Present attack.—Last Wednesday (the 23d) she felt rather poorly, and sick at the stomach, but there were no actual rigors or general pains. On Thursday (24th) the rigors came on, with much vomiting at night. The ankles also became rather painful and sore, but they were not swollen or red. She accordingly rubbed them well over with some opodeldoo, but with little relief, and her mistress gave her some gin and water, which she took at bed-time. She was unable to sleep that night, being very restless. On the Friday morning, when she got up (25th), she found her knees were very painful and stiff, but not swollen or red. She had at the time no rigors, but much nausea and thirst, and she drank accordingly Oiss. of porter. There was entire loss of appetite. She consulted a medical man, but did not take his medicines, and subsequently walked to the hospital; but not finding the physician, she left it, and walked to her father's house in St. James Street. She could not sleep any better that night, being in a high fever. On the Sunday morning (27th) she noticed for the first time that her knees were swollen and red; her elbows and wrists also appeared to be

swollen. She rubbed the parts with soap liniment, but without relief. During the day she was occasionally delirious, talking a great deal of nonsense, as afterwards informed by her parents. In the night she slept but little, owing to the intensity of the pain. On Monday, the 28th, she was no better. The ankles in addition were red and swollen; and, for the first time, she began to feel a pain in the chest, beneath the left mamma, increased by a deep inspiration. The delirium persisted during the day. In the morning of the 29th the ankles were less swelled, but the pectoral pain much more intense. Her thirst and fever had continued unabated. She sought admission into this hospital. Had kept her bed since Saturday (26th); had left off work since Friday (25th). It does not appear that she took any medicines all this while. Her urine was scanty and high coloured. Bowels costive.

Present state.—No rigors. Feels hotter than usual. Perspiration is copious, emitting a sour odour. No general pains. Feels weak, tired, and restless. Colour of skin over trunk natural. No eruption. She states she is thinner than formerly, but she looks very stout now. Cannot lie on either side, on account of the pain below the heart. Prefers to lie on her back. Knees and ankles very painful on pressure, especially the knees, which are red and swollen. The shoulders and elbows are also slightly red, but not the hands. She feels rather confused in her head, but there is no delirium at present. Is very restless at night, and cannot sleep. No headache or giddiness. Expression of countenance rather anxious. Cheeks flushed. Lips red and dry. Eyesight somewhat dimmer than usual. Other senses not affected. There is some weakness, but no actual pain in the spine. Respirations thirty in a minute. There is a catch on a deep inspiration, about the fifth rib in front, a little on the right side of the left mamma. Her voice is somewhat hoarse. Slight cough; no expectoration.

Heart.—There is no pain in the region of the heart, except when she takes a long breath. No palpitation or fainting. All the pain she feels is referred to the margin of the ribs of the left side. There is a loud double friction sound heard most distinctly on the right side of and on the sternum at the base, but it is heard very generally all over the cardiac region. It is not heard behind, nor is there any tremulous motion communicated to the hand. The impulse is not increased. The double friction-sound is heard most distinctly when she holds her breath. The dulness transversely extends from the middle line of the sternum to about two inches towards the

left side longitudinally from the fourth rib to the upper border of the sixth rib. The seat of dulness changes about one inch on either side, as the patient is made to lie on the right or left side. Pulse 96; compressible.

She complains of a bad taste in her mouth. Tongue is covered with a thick yellow fur; red at the apex, and dry. There is no sore-throat or difficulty of deglutition. No appetite; much thirst and nausea, occasionally vomiting. No abdominal tenderness. Bowels open. Makes very little water; very dark coloured, but none has been saved.

Catamenia first appeared at eighteen, but she continued very irregular up to five years ago, since which time she has been more regular. It generally recurs once a month. It has always been sufficient in quantity. The catamenia is present now. Never had leucorrhoea, except just before a monthly period.

Supposed exciting causes.—She attributes her present illness to the hard work and late hours she was obliged to keep at her two last places. Besides, she slept in her last place in a damp back kitchen.

Treatment.—April 20th.—C. C. regioni Cordis ad. ℥vj. ℞ Calomelanos, Opii, Antim. Tart. aa. gr. j. fiat pil. 8va q. q. s. ℞ Magnesias, ℥j.; Magnesias sulph. 5ij.; Vin. Sem. Colch. 3ss.; Aqua Ment. 3iss. fiat haust. inter singul. dos. pilularum sumend. Low diet.

30th.—The patient slept a good deal last night. The pain in the ribs is much less since the cupping, but the catch still persists. The ankles are tender, but scarcely swollen at all. The elbows and shoulders are less painful. The medicines make her feel very sick and faint. The friction-sound is if anything louder to-day, but there is no increase in the limits of the cardiac dulness. The bowels are freely opened. No urine saved. The blood drawn by the cupping yesterday is somewhat buffed. Pulse soft, 96. Pergat pil. c. Antim Tart. gr. ss. tantum.

May 1.—There is scarcely any swelling, save a little puffiness in the knee, which is less tender also on pressure. The pain in the anterior ribs is much less. The cardiac dulness does not reach higher than between the fourth and fifth ribs; it is also a trifle less transversely. The double friction sound is much louder and more generally heard over the cardiac region; it is heard very distinctly at apex. The patient is perspiring freely, and the perspirations have a very strong sour odour. The pills continue to make her very sick. Tongue is still furred, but less than it was. Urine very acid, sp. gr. 1020; of a dark colour, like port wine; no albumen; with a large

excess of urea, as shown by the addition of nitric acid.

2d.—There is no swelling in the limbs to-day. Cardiac dulness much the same. The double friction-sound more audible. The catch on a deep inspiration persists, but is much less severe. On percussion behind, the right supra-spinous fossa is duller than the left, and the respiration is tubular. There is also slight crepitation heard at the end of a deep inspiration. Opposite the lower angle of the right scapula there is a slight friction sound heard, irregular, leathery in character, both with the inspiration and expiration. The vocal vibrations superiorly are much the same; indistinct inferiorly. The tongue is still rather furred. The catamenia has disappeared. *R. Emplast. Lyttæ regionis cordis.*

3d.—The blister has risen well. The double friction sound is much more distinct. The dulness in the cardiac region is unaltered. On placing the hand over the heart a slight tremor is felt. In addition to the physical signs noted yesterday, on placing the hand at about two inches externally to the angle of the right scapula there was a slight tremor communicated. A friction sound was heard exactly at this spot, though immediately around only large crepitation and sonorous rhonchi. Percussion on both sides yielded inferiorly an exactly resonant sound. Pulse 92, moderately full. No pain in the limbs to-day, but there is some stiffness remaining. Slept very indifferently last night. Bowels open once. The pill continues to make her very sick. *Sumat. pil. nocte maneque tantum. Middle diet.*

5th.—She is perspiring freely at present. The expression of the countenance is somewhat flushed, but placid. Tongue clearer. There is no diminution of the cardiac dulness. The friction sound is scarcely so loud as it has been. Behind there is still more dulness on percussion on the right than on the left supra-spinous fossa, where the respiration is tubular. Inferiorly, over the lower angle of right scapula, the sound heard is less like friction, and more like mucous rhonchi, and humid generally in character. She complains a good deal of cough to-day. Pulse 100, full.

6th.—Slept pretty well last night. She feels altogether much better. The catch and pain at the side have entirely disappeared. She complains of feeling very weak and faint on attempting to raise herself in bed. She vomited last night, bringing up all her tea. To-day, however, the sickness is rather better, and she has been able to retain her food, but not her medicines. Tongue is still furred. Bowels open three times a day. Skin is hot, moist, and the sour odour not nearly so perceptible. No palpitation. The gums are sore

and spongy, but there is scarcely any fetor in the breath. Pulse much more compressible, remoter, 96. Lips very red. There is large crepitation heard all over the right back, and no resemblance to friction can be detected. There is also some crepitation on the left back, but except at the lower part there is very little as compared with the left. To have *Oj. beef-tea* daily.

8th.—Lips are more parched to-day, and the face looks more flushed and anxious. The cough is more troublesome. No appetite. Some general pains flying over the body. She is very thirsty. Pulse 104, small, and resisting. There is no increase of dulness over the cardiac region; the friction sound persists, but is less distinct. The respirations are hurried, and she speaks by starts. The physical signs of the chest are generally the same as before, except at the lower part of the left back, where there is more dulness on percussion, and the respiration is distinctly bronchial. The vocal vibrations are also stronger. *C. C. interseapulas ad 3vj. Omite altera medicamenta. R. Antim Tart. gr. j.; Mist. Amygdal 3vj. sumat. cochl. anap. ij. 4ta q. q. h. Low diet.*

10th.—Altogether she feels much better to-day. The face is less flushed. Countenance less anxious. The physical signs about the heart are the same as before. The left inferior back is still duller on percussion. The expiration is too loud, and intermixed with mucous rhonchi, but there is no bronchial respiration remaining. Over the right back generally there are sonorous and mucous rhonchi heard. The character of the former sometimes seem to resemble those of friction sound, and are not affected by coughing, though this was repeatedly tried. Bowels are freely opened. Cough much less troublesome. The medicine makes her feel occasionally very sick. *Beef Tea, Oj.*

12th.—The patient has slept pretty well at night ever since last report, and the cough is less troublesome, but she seems very restless, and in a highly nervous state. Pulse 120, but soft. The friction sound at the heart is much less distinct, particularly at the base, where the second friction sound is scarcely heard at all. There is less mucous rhonchus heard in both lungs; in other respects as before. Bowels open.

13th.—The cough is decidedly better, but she continues very restless and nervous. Pulse 132. The respirations very hurried, above 40 in a minute. She throws up all her medicines. She did not sleep well at all last night. Her hands are at times highly tremulous, so that she cannot keep them still. Her countenance is anxious, the expression hysterical. *R. Omite omnia medicamenta.*

14th.—She is decidedly better to-day. She slept better, she says, last night, than since her admission in the hospital. There is no palpitation, and the friction sound is not heard. There is, however, a *distinct murmur with the first sound heard at the apex*. It is less distinct at the base; not heard in the neck or top of the sternum. There are sonorous and *substant* rouchs heard more or less all over the right back. Pulse 120, perfectly soft and compressible. Bowels open.

15th.—There is no palpitation at the heart. The mitral murmur at the apex is more distinct, and a slight friction sound is again heard at the base. Pulse quite soft and compressible. There is considerable pain on pressure at the epigastrium. To have a chop daily.

17th.—The epigastric pain is decidedly worse, and increased by a deep inspiration. The tongue is clearer, but drier. The mitral murmur is much louder, but circumscribed. The friction sound has entirely disappeared. Pulse soft, small, and compressible, 98.

Behind on percussion there is increased dullness over the right supra-spinous fossa, and for about two inches lower down, and the respiration at these parts is bronchial. In the corresponding portions of the left lung the respiration is healthy. The vocal vibrations on the right side are stronger, and there is bronchophony besides. The sounds of the heart are also heard louder on this side than on left. Inferiorly, in the lower third of the left lung, there is if anything more dullness on percussion than in the corresponding portion of the right lung. Expiration is too loud, and the vocal vibrations stronger. She states herself that she feels quite well, and has no pain whatever in the chest, but her statements are not to be relied upon, as she is very averse to taking her medicines, and conceals her real state. Bowels open. R. Decoct. Cinchona, ʒiij.; Porter Oss. Acid. Sulph. dil. ʒiij. ter quotidie.

21st.—She sat up yesterday for about an hour and a half, and says she felt much stronger. Skin is moist, and face looks paler. No headache or giddiness. There is some pain on the left side of the dorsal region on pressure, and tenderness of the skin below the left mamma. The murmur at the apex is still heard, but is scarcely so loud as before. Pulse 108, soft, and pretty full. Bowels open.

22d.—The patient is very restless to-day, and the nervous tremors of the hands have again appeared. There is very considerable spinal tenderness and superficial pain beneath the left breast. The impulse of the breast is also too extended, and there is some tremor over it. But the sounds

have quite a nervous character. The mitral murmur persists. There is still greater dullness superiorly beneath the right clavicle, and inferiorly behind at the bottom of the left lung.

The respiration is still bronchial, with bronchophony in these parts. Bowels open twice. No sickness. Appetite very good. There is still some deep-seated tenderness at the epigastrium. Forset in usu Mist. addendo Tinct. Cinchona, ʒiij. Beef Tea, Oss.

27th.—She appears to be improving. Tongue clean. Appetite good, and she feels stronger. Pulse 110, trembling. There is certainly less dullness on percussion at the lower part of right back, and the respiration is no longer bronchial; in other respects the physical signs are unaltered. The pain at the epigastrium is perhaps more severe.

29th.—She is decidedly not so well to-day. The skin is hot and dry; there is also slight headache, but no giddiness. The face looks more flushed, and she is coughing more. The pain at the epigastrium is also more severe, increased upon coughing, or when she takes a long breath. The mitral murmur is very loud, and the impulse of heart is increased. Respirations 54 in a minute. Pulse 144, full, but compressible. There is some nausea, but not much thirst. The physical signs of the chest are about the same. The dullness inferiorly and behind on the left side is less. R. Omitt. Medicamenta; admoveantur Hirudines x. regioni cordis.

30th.—After the application of the leeches yesterday she was very sick and faint, but to-day she feels much better. The cardiac action is not so tumultuous, but the mitral murmur is equally loud. There is not, besides, that catch that there was before on a deep inspiration, but the tenderness on deep pressure at the epigastrium still remains. There is no headache or giddiness. Pulse 120, weak, and compressible.

31st.—There is much less pain to-day at the epigastrium, but the patient is become very hysterical. The hands and voice are very tremulous, and she speaks by starts. Respirations are hurried. Pulse 124, very compressible. She is very restless, sometimes sobbing, and at other times laughing immoderately. There is no difference in the physical signs. The heart sounds are felt quite as distinct beneath the sternum as at the apex. To have extra full diet; Porter Oss.; Beef Tea, Oss.

June 1st.—Last night at about 7 P.M. she was taken with severe dyspnoea and pain in the chest, but there was also great superficial tenderness; a mustard poultice was applied to the cardiac region, which immediately relieved her.

State of Urine.

Date.	Lithates.	Reaction.	Sp. gr.	Quantity passed in 24 hours.	Diet.	Microscopical characters.
May 1	None.	Veryacid.	1020	—	Low.	May 19th. The urine exhibited a great number of hairs, casts of the unfundibula (three together); very many epithelium scales, and square crystals of uric acid.
" 4	Much.	Do.	1023	3viii saved.	Middle.	
" 5	Do.	Do.	1021	3vi.saved.	—	
" 6	Do.	Do.	1024	324	Middle; beef-tea, Oj.	
" 8	Do.	Do.	1024	3x. saved.	—	
" 10	Do.	Do.	1024	Do.	Low.	
" 11	Do. $\frac{1}{2}$	Do.	1024	—	Beef-tea, Oj.	
" 12	$\frac{1}{2}$	Do.	1025	3x. saved.	—	
" 14	Much.	Do.	1029	3iv.saved.	Chops daily.	
" 15	Do.	Do.	1027	3xi.saved.	Reef-tea, Oss.	
" 16	Do.	Do.	1025	—		
" 17	Clear.	Do.	1026	3xii saved.		
" 19	None.	Do.	1025	Do.		
" 20	Do.	Do.	1014	Do.		
" 21	Do.	Do.	1016	3xi.saved.	May 29th. An enormous number of epithelium scales.	
" 22	Do.	Do.	1020	Do.		
" 23	Do.	Acid.	1016	3xx.saved.		
" 24	Do.	Do.	1026	—		
" 26	Do.	Do.	1018	—		
" 27	Do.	Veryacid.	1016	—	June 9th. Small organic globules; crystals of triple phosphate.	
" 28	Do.	Do.	1016	—		
" 30	$\frac{1}{2}$	Do.	1030	—		
" 31	—	—	—	—	Extra full; porter, Oss.; Beef-tea, Oss.	June 12th. Numerous epithelium scales, three casts of the tubuli uriniferi together.
June 3	Much.	Do.	1029	3v. saved.		
" 5	Do.	Do.	1027	3v. saved.		
" 6	$\frac{1}{2}$	Do.	1029	—		
" 7	—	Acid.	1029	Ojss.		
" 10	Some.	Veryacid.	1030	Ojss.		
" 12		acid.	1027	Ojss.		

On the 5th and 9th May there were traces of albumen present.

3d.—She continues much in the same state, being highly nervous, with much superficial tenderness beneath the left mamma, extending to the left dorsal region. There is no epigastrie pain. The tremors of the extremities continue. The physical signs

about the heart are unaltered. The upper part of right lung is still duller on percussion than the left, but the respiration is in no way bronchial; the expiration, only, continuing too loud. Large crepitation exists in these parts. Inferiorly, at the lower part of the left lung, the respiration appears healthy. There is scarcely any cough. Pulse 144, weak, and compressible. She had slight pain to-day across the loins, but which soon passed off. She sleeps pretty well, though she is occasionally disturbed by spasmodic pain of the chest, with dyspnoea, which comes on suddenly, and after a few minutes as rapidly disappears. The catamenia, which should have appeared on the 31st, has not yet made its appearance.

5th.—She is not so well again to-day. Pulse is 120, and fuller. The skin hot and dry. In addition, moreover, to the superficial pain beneath the right breast, there is a deeper seated pain. Tongue is more furred. Face again flushed. There is also considerable headache. The impulse of the heart is increased. The cardiac dullness reaches three inches transversely, beginning at the right border of the sternum. The murmur is still very loud. *R. C. C. ad 3xij. regioni cordis. R. Liquoris Ammon. Acet. ʒiv. ; Vin. Sem. Colch. ʒss. ; Mist. Camph. ʒj. post operationem octava q. q. h. s. Omit the beef-tea and Oss. porter.*

7th.—The cardiac pain was relieved by the cupping, and she felt better yesterday. To-day, however, she is scarcely so well. She perspired profusely last night, and the odour was very sour. To-day the right knee is a little painful and tender on touch, but neither swollen or red. The superficial tenderness persists. She still suffers occasionally at night with spasmodic dyspnoea and cardiac pain, but the fits do not last so long. There is no headache. Bowels freely opened. To have Oj. milk daily.

10th.—She is much improved since last report. Her appetite is good, and she is looking much better. She continues somewhat hysterical, and has had the globus hystericus three times to-day. Bowels freely opened.

12th.—She states she feels herself quite well. Her countenance is much improved, and she walks about without any pain. The cardiac dullness extends transversely from the right border of the sternum, to apparently five inches transversely, but the limits cannot be very accurately ascertained by reason of the large size of the mamma. Right reaches as high as between the third and fourth ribs. The mitral murmur persists, but is scarcely so loud; it is not heard at the top of the sternum or in the carotids. Posteriorly, the right supra-spinal fossa and supra-clavicular region are

duller on percussion than the corresponding portions of the left side. In these parts on the right side the expiration is still too loud. Large crepitation is also heard over the greater part of the middle one-third of the right lung. There is no dullness inferiorly on the left side, and the respiration elsewhere is generally healthy. The vocal vibrations are equally heard on both sides. Her appetite is excellent. Tongue clear. Discharged cured.

State of urine.—The tabular form in the preceding page exhibits this. The quantity passed in the twenty-four hours could never be accurately measured in this case: at first by reason of the rapid purgation, but chiefly because she would never herself save but a small portion of her urine for examination. As such, the quantity of solid matters excreted in the twenty-four hours has not been calculated.

Correspondence.

HOSPITAL FOR SICK CHILDREN. THE TREATMENT OF INFANTILE DISEASES AT GUY'S HOSPITAL.

SIR,—In your leading article of last week, you very properly, and in graphic terms, alluded to the great importance of the establishment of an hospital devoted to the treatment of infantile disease. It would be impossible to canvass the correctness of the positions you assumed, or to doubt for one moment how great a boon to the inhabitants of this metropolis such an institution would prove. Fully and completely agreeing with you, I must nevertheless venture to assure you that the treatment of diseases peculiar to childhood is not so overlooked and neglected as the text of the leading article in question, and the extracts from the prospectus of the proposed hospital, would seem to imply.

In bare justice to the hospital to which I have been attached for many years, I beg permission to assure you, and through you the profession, that at Guy's at least the neglect alluded to does not exist. For seven years a special arrangement has existed at Guy's, for the purpose of insuring attention to children's diseases. My friend and colleague, Dr. Barlow, took the initiative in this matter, and commenced it by devoting a portion of his time to the children who applied among the out-patients. His plans were placed in my hands on the changes occurring in our medical staff by the retirement of Dr. Bright. Feeling very considerable interest in the matter, I applied to our late treasurer, Mr. Harrison, who with that zeal and promptitude which characterised him in everything

connected with the extension of the benefits conferred on the poor, at once succeeded most kindly to all I requested, and under his fostering care; from very small beginnings, this department of our hospital has attained considerable importance.

With your permission, sir, I will briefly detail the mode in which this children's establishment is conducted. It consists of two departments—an out-patient establishment, and a ward. On every Friday we have a large number of applicants; from these, in addition to the patients actually under treatment, fifteen of the most urgent cases are selected. Brief notes are taken of each case by one of the clinical clerks, from my dictation; they are prescribed for in the presence of the pupils, and every opportunity is taken to offer practical remarks in connection with the diagnosis and indications of treatment. This "poly-clinique" is always well attended, and every endeavour is exerted to make it of use alike to our pupils and the patients. The actual number of cases treated is always sixty on each day of attendance, often exceeding this number. A ward of thirteen beds (and if required, even more) is set apart for the reception of the more urgent or interesting cases, and here we have in the course of the year an opportunity of noting most varieties of infantile diseases occurring between the ages of eighteen months and eight years. Notes of all these cases are carefully preserved, and during the summer session clinical lectures are regularly delivered, in addition to the bedside instruction, which every opportunity is taken of affording. On an average we have annually under treatment 700 out-patients, and 150 in our ward; and from this number of cases, although comparatively small, much valuable clinical experience has been gained, and a vast amount of suffering saved to the poor. One great fact, indeed, has been taught us by our ward—namely, the astonishing facility with which even severe disease is cured in the infant when removed from the cause which aided its development. Too much importance can hardly be placed on this circumstance, and no one could credit the facility with which acute and perilous affections are successfully treated in the ward, under the aiding influence of cleanliness, good air and proper food, when compared to the obstinacy and often fatal terminations of cases of disease otherwise analogous, when treated without these advantages among the out-patients.

I feel that an apology is due for thus trespassing on the pages of your valuable journal; but I could not permit myself to remain silent under the very broad imputation of neglecting children's diseases, which

was thrown upon the metropolitan hospitals. If my remarks serve to stimulate the authorities of other hospitals to emulate Guy's, and set aside a ward for infantile diseases, making them the subject of clinical instruction to the pupils, a vast amount of good would be effected; and as most important, and, so far as I have seen, highly appreciated addition made to medical education.—I remain, sir,

Your obedient servant,
GOLDING BIRD, M.D. F.R.S.

19, Myddelton Square,
March 23, 1856.

ON THE USE OF ELECTRO-GALVANISM IN MEDICINE.—INQUIRY OF DR. CUMMING.

SIR,—The two communications of Dr. Cumming on Electro-galvanism possess great interest as tending to show its probable efficacy in many disorders for which it has not generally been used. Dr. Cumming's communications are very full, but still there are two or three points which he has not noticed, and which are important. In many of the galvanic machines the current is a forward and backward current, traversing the nerves first in one direction, then in the other or opposite direction. In other machines the current runs uniformly in one and the same direction. Now it is desirable to know—1stly, which of the above-named machines was used by the doctor; 2dly, whether he applied the poles indiscriminately to the different parts of the body, or whether he kept one pole, and if so, which, always at the back of the body and source of the nerves, and the other pole at the termination of the nerves; and 3dly, whether the battery used was Smee's battery—viz., zinc and platinumized silver; and if so, what was the size of the plates, and what the number of plates used. In the LONDON MEDICAL GAZETTE of June 4th, 1847, page 979, there are some remarks on currents running in different directions. Dr. Cumming's evident desire to afford information will no doubt induce him kindly to give an early answer; and, by inserting this and his reply in the LONDON MEDICAL GAZETTE, attention may be more fully drawn to the subject.

INQUIRER.

Liverpool, March 14, 1856.

DR. CUMMING'S REPLY.

SIR,—I have been favoured, by the courtesy of "Inquirer," with a copy of a letter addressed to you, requesting information on three points connected with the Electro-galvanic Instrument I am in the habit of using; and I cheerfully comply with his request, hoping that greater attention will thus be drawn to its utility in affections which are not the less distressing that they

are so common, and which have hitherto been treated by medicines whose tendency is only to serve a temporary purpose, while unquestionably they do not correct the source of the mischief.

I may premise that proofs of its success are of such almost invariable occurrence that I have as much confidence in its efficiency as I have in anything medical; and I can only say that nothing but a faithful and intelligent application of the agent is wanting to convince others as positively as myself. It may be necessary to state that, from the moment of beginning the electro-galvanic treatment, all medicines of an aperient kind are abandoned, and only an occasional enema of warm water and salt given till the action of the bowels is established by the use of the instrument.

I feel obliged to "Inquirer" for the kind way in which he has given me credit for a desire to make others participants for my own views and practice in this matter; and it will afford me much pleasure if either he or any other honest inquirer will state any difficulties they may experience, or any want of success, confident as I am that a few words of explanation will suffice to remove them. And assuredly it will be no small gratification to me to learn that many others have partaken of the pleasure I now so frequently enjoy of seeing their patients freed from the horrors of habitual constipation, and from the equally great misery of the habitual use of drugs, and of witnessing the renovated freshness of body and mind, the elasticity and exhilaration of feeling, that all evince when this desirable consummation has taken place.

Distrustful of my own knowledge of the instrument, I applied to my friend Mr. Kemp, who has kindly favoured me with the following information :—

1. The current is a backward and forward one.

2. The battery used is Smee's, formed of two amalgamated zinc and one platinized silver plates, the size five inches by three. They are arranged in the usual manner with a brass clamp and binding screws, and one set only is employed. The solution to excite it is composed of one part of sulphuric acid to eight parts of water.

3. The poles are applied indifferently to the spine or the abdomen, although I am now inclined to imagine that I have seen more constant results when the same sponge is applied always to the spine, than when at one time to the spine and at another to the abdomen. This, however, is scarcely more than mere conjecture.

Your most obedient servant,

WILLIAM CUMMINGS

140, George Street, Edinburgh.

March 18, 1850.

Federal Intelligence.

**A NEW METHOD OF PREVENTING THE LOSS
OF WATER BY EVAPORATION IN TANKS,
RESERVOIRS, PONDS, WATERHOLES, &c.,
AND ESPECIALLY ADAPTED FOR USE IN
HOT CLIMATES. BY ROBERT J. GRAVES,
M.D., M.R.I.A. (COMMUNICATED TO THE
ROYAL IRISH ACADEMY, ON MONDAY,
12TH FEBRUARY, 1850).**

In certain regions of the earth nature has placed obstacles, apparently insurmountable, to the free and comfortable enjoyment of existence; one of these has hitherto baffled all the efforts of art, and is caused by the prevalence of drought: thus, in Australia rain falls at certain periods of the year in such great abundance, that the rivers overflow their banks, and large tracts of country are entirely inundated for a considerable length of time; shortly after the close of the rainy season the water subsides; and in the course of a few weeks, so great has been the evaporation, that where deep and rapidly-flowing rivers existed, nothing remains but stagnant pools, water holes, and lake-like reaches of the rivers, occurring at intervals in their former beds: these natural reservoirs of water are of the most vital importance to the colonists and their extensive flocks. But there are many seasons, during which the air becomes so extremely hot and dry, that even these reservoirs are dried up, and man and beast are forced to quit the now inhospitable district. A similar defect of climate exists in many other countries, such as Hindostan, Scinde, and those kingdoms bordering on the banks of the Euphrates, which were the very first settled and occupied by civilized peoples. Man has in all these places struggled from the earliest periods to secure for himself a sufficient and continuous supply of water—the life-blood of living beings, whether animal or vegetable. To promote an object of such paramount importance, we find that national works of the most expensive and magnificent description have been undertaken by the rulers of these countries: thus, in Hindostan, the Mogul Emperors have each emulated his predecessor in the construction of tanks of immense magnitude, and at enormous expense, to preserve the necessary supplies of water during the dry season. The Kings of Ceylon even exceeded the Mogul Emperors in the size of their tanks, constructed for the same purpose; while in Mesopotamia, and the valley of the Tigris and Euphrates, the Kings of Persia and Afghanistan have resorted to the expedient of

dient of constructing reservoirs under ground, and in some instances they even went so far as to conduct rivers league after league beneath the soil, in order to obviate the evil results of evaporation: each village having a well, by means of which they were enabled to draw up the treasures of these subterranean currents. In Constantinople the Greek Emperors built extensive arched reservoirs for holding water, and from which a considerable portion of the city was supplied with this indispensable element.

To persons living in this moist climate it may appear of very little importance to guard against the evaporation of water and the effects arising from it; but to the philosopher, who, by experiment in his laboratory, has made himself familiar with the power of evaporation; or the traveller, who, like Mr. Sturt, has seen in Australia, evaporation carrying off daily from reservoirs, the water upon which his own life, and that of his companions and cattle depended; and who has marked the appalling rapidity with which it disappears, when the air has become dry or parched from the great heat prevailing; to such, I say, it must appear evident that evaporation may become so intense as to render nugatory all efforts to preserve any large supply of water in open tanks or reservoirs, and thus prevent the colonization of countries in other respects most desirable. Sir T. L. Mitchell observed the thermometer at 126° in the shade, under the influence of the hot dry wind of Australia: how rapidly must evaporation proceed, when water is exposed to such a wind?

It is my object to show that this great source of waste may be effectually prevented, and that, too, by very simple means; and that the surface of reservoirs, tanks, water-holes, and ponds in the hottest climate and warmest weather, can be for the most part preserved from the loss occasioned by evaporation.

The method which I propose for resisting the evaporation of water could not have been either thought of or applied before the present time, when a succession of discoveries has rendered us masters of many vegetable substances, such as Indian rubber, gutta percha, &c., which, after passing through certain simple processes, may be made available for rendering linen, cotton, woollen cloths and canvas, when even of the finest texture, impervious either to air or water. It is by the help of such prepared canvas that the contrivance I am about to describe is to be carried into execution.

Those who are practically versed in this department of art, will readily suggest what species of impermeable water-proof canvas

is best adapted in practice for the accomplishment of so desirable an end. For me it is sufficient to know that such a material can be manufactured at a cheap rate, of a light but strong texture, and in sufficient quantities to cover, as with a carpet, any extent of water that may be necessary. Where a piece of water is to be protected from evaporation, its water-proof carpet may be spread by the following simple means:—at suitable distances from each other on the canvas, and made of the same material, are to be inserted, pouches or bags, which, when it is wished to float the canvas on the water, may be inflated with air in the usual manner; when not in use these bags need not, of course, be otherwise than in their collapsed condition. Let us suppose a piece of canvas nine feet in breadth, and 150 in length, having three bags in rows, twelve or fifteen feet distant from each other; let us suppose such a piece of canvas placed on the water of a tank, it will then protect from evaporation a surface corresponding to its own extent. Similar pieces might be attached, by tying together their sides and ends, until the whole surface was similarly protected; all this could be done without much labour or trouble; the canvas could be carried in a boat, and dropped from its stern in the same manner as fishermen drop their nets, the men inflating each row of pouches or bags at the time it became necessary to cast them in; ropes could be also fastened to the extremities of the piece, so as to connect it with the bank or other boundary of the space of water, loops being attached to their extremities for this purpose; such canvas could be easily spread out or hauled in, and would effectually prevent, while over the water, any evaporation taking place, no matter how dry the atmosphere, or how intense the heat of the sun; neither would this method have the inconvenience that at first it is apparently liable to, of heating the water in the tank, &c., for we know that water cannot be easily heated from above, inasmuch as the water warmed at the surface becomes specifically lighter, and thus being incapable of sinking, forms a superficial stratum, which prevents the propagation of the heat downwards. It is evident that by this method a considerable quantity of the covering, sufficient, indeed, to form a non-evaporating surface over large ponds, water-holes, &c., might be carried by a single horse. When an exploring party, so provided, arrives at a pond, water-hole, &c., they can readily cover it, either by carrying ropes round the piece of water, or by means of one or two men swimming across, holding the ropes attached to the edge of the canvas; thus may be preserved for months a supply,

which, if left exposed to the absorbing influence of the atmosphere, would have vanished in the course of a few weeks.

The following extract, from the work of Lieutenant-Colonel Sir T. L. Mitchell, Surveyor-General of New South Wales, proves that the preservation of water will hereafter form in Australia the most essential feature in agriculture, and consequently every means adapted to facilitate this object will be of the greatest value in that extensive field for British colonization and enterprise. "With equal truth it may be observed that there is no region of the earth susceptible of so much improvement, solely by the labour and ingenuity of man. If there be no navigable rivers, there are no unwholesome savannas; if there are rocky ranges, they afford at least the means of forming reservoirs of water; and the hand of man alone is wanting to preserve the supply, and regulate its use. Where natural resources exist, but require art and industry for their development, the field is open for the combination of science and skill, the profitable investment of capital, and the useful employment of labour."

The preceding extract distinctly shows (what indeed is confirmed by other travellers) that civilized man will be unable to form permanent settlements in the extensive and fertile regions forming the interior of Australia, unless he can call to his assistance means adequate to overcome the formidable difficulty presented by want of water, during several months of the year. The method I have invented, by which we can readily and cheaply cover even a large surface of water, will, no doubt, greatly facilitate the accomplishment of what would be otherwise in many localities unattainable. Instead of the expense of vaulting over reservoirs, or covering tanks, we can now make the *water itself support its own roof*—a roof, it is true, thin and delicate of structure, but, nevertheless, by reason of its impermeability, not less capable of preventing evaporation than if it consisted of the most solid masonry. This floating carpet or roof possesses the great additional advantage of rising or falling, according as the quantity of water in the reservoir increases or diminishes, so that all access of air to its surface, and consequently all evaporation, is prevented. This covering being opaque, will keep the water perfectly in the shade, a circumstance which, combined with deficient ventilation, would in itself much retard evaporation, as is exemplified even here by the wetness of roads, overshadowed by trees, and by the water remaining in ditches, when covered by *Lemna* or duck weed, so long after the summer heats have dried up all other ditches in their neighbourhood.

JOHN HUNTER'S COLLECTION OF ANIMALS.

THE variety of birds and beasts to be met with at Earl's Court (the villa of the celebrated Mr. John Hunter) is matter of great entertainment. In the same ground you are surprised to find so many living animals in one herd from the most opposite parts of the habitable globe. Buffaloes, rams, and sheep from Turkey, and a shawl goat from the East Indies, are among the most remarkable of those that meet the eye; and as they feed together in the greatest harmony, it is natural to inquire what means are taken to make them so familiar and well acquainted with each other. Mr. Hunter told me that when he has a stranger to introduce, he does it by ordering the whole herd to be taken to a strange place, either a field, an empty stable, or any other large outhouse with which they are all alike unaccustomed. The strangeness of the place so totally engages their attention, as to prevent them from running at, or fighting with the new-comer, as they most probably would do in their own field (in regard to which they entertain very high notions of their exclusive rights of property), and here they are confined for some hours, till they appear reconciled to the stranger, who is then turned out with his new friends, and is generally afterwards well treated.—*Middleton's Survey of Middlesex, by Southey.*

GROWTH OF AN ARTERY.

IN the case of a young man named M'Vickers, whose legs were torn by red-hot wires, a hemorrhage of considerable amount occurred beneath the dressing, which was not disturbed for twenty-four hours. On removing the clot, there was found in it, continuous with the posterior tibial artery, a *defined tubal coagulation* or organization, soft and white, although even thicker than the arterial coats, which had progressed already to the length of a quarter of an inch or more. The closure of the end of a torn vessel, then, is not always the sole process which occurs.—*Notes of Hospital Cases, by Dr. Hartshorne, in American Journal of Med. Sciences, Jan. 1850.*

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 28d instant:—Messrs. J. S. Brice, W. M. Clarke, J. T. Grantham, T. Mudge, R. Rayner, C. R. Maxwell, H. W. Sharpin, W. V. Jones, W. T. Robertson, A. Collins, A. Rogers.

MEETING OF FELLOWS OF THE COLLEGE OF SURGEONS IN REFERENCE TO THE NEW CHARTER.

A PUBLIC meeting of Fellows of the Col-

lege was held at the Freemasons' Tavern, Great Queen Street, on the 25th instant, for the purpose of adopting measures to induce the Council of the College to abstain from carrying out certain proposed alterations in the charter of 1843, by which medical practitioners of a certain standing were admitted to the rank of Fellows of the College of Surgeons without passing through the second examination at present required. The chairman, in addressing the meeting, which was rather thinly attended, adverted to the manifest injustice of the new charter, by which the College had broken faith with the profession by rendering members of a few years' standing eligible to the fellowship without a second examination. Many gentlemen were induced to incur the expense, loss of time, and possible disgrace consequent upon undergoing such an ordeal, in reliance upon the official statements of the College that the charter of 1843 was a final measure, which would assign to each individual his status in the surgical profession. It would have the effect of lowering the fellowship, and making it valueless in the public estimation. A large number of members would then be admitted to that honour without any examination, in spite of the notorious fact that many who stood for the fellowship were rejected.

Mr. Roberts proposed, and Mr. Holmes Coote seconded the first resolution, which embodied the principal objections made to the charter by the chairman. Against this resolution Mr. Erichsen proposed, and Mr. Wakley, jun., seconded the following amendment:—

"That the fellows by examination of the Royal College of Surgeons respectfully request the council of the Royal College not to allow any supposed rights of theirs to interfere with the admission into the fellowship, without examination, of members of certain years' standing, under such regulations as the council may think fit; or with the adoption of such other measures as may tend to the harmony of the profession, and to the dignity and the security of the college."

The resolution and amendment were both put to the meeting, and the former carried by a small majority. Several gentlemen then addressed the meeting in support of various resolutions favouring the objects of the meeting, and a memorial to the council of the College of Surgeons, and one to Sir George Grey, having been read and resolved on, the meeting separated with a vote of thanks to the chairman. At the close of the proceedings each gentleman present subscribed 10s. towards defraying the expenses of the meeting.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, Mar. 23.

BIRTHS.		DEATHS.	
Males....	769	Males....	226
Females..	694	Females..	556
1463		782	

CAUSES OF DEATH.

ALL CAUSES	1626
Specified Causes	1019
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	161
<i>Sporadic Diseases, viz.—</i>	
2. Dropsy, Cancer, &c.	34
3. Brain, Spinal Marrow, Nerves, and Senses	120
4. Heart and Bloodvessels	47
5. Lungs and organs of Respiration	231
6. Stomach, Liver, &c.	53
7. Diseases of the Kidneys, &c.	15
8. Childbirth, Diseases of Uterus, &c.	13
9. Rheumatism, Diseases of Bones, Joints, &c.	6
10. Skin	1
11. Old Age	50
12. Sudden Deaths	31
13. Violence, Privation, Cold, &c.	35

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox	6	Convulsions	25
Measles	23	Bronchitis	99
Scarlatina	14	Pneumonia	99
Hoop-cough	26	Phthisis	135
Diarrhoea	20	Lungs	12
Cholera	1	Teething	10
Typhus	31	Stomach	6
Dropsy	14	Liver	7
Hydrocephalus	16	Childbirth	5
Apoplexy	35	Uterus	3
Paralysis	18		

REMARKS.—The total number of deaths was 44 above the average weekly mortality of the twelfth week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer	29.97
Thermometer	57.8
Self-registering do.	Max. 6.0 Min. 13°
* From 12 observations daily. * Sun.	

RAIN, in inches, '12.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 6.1° below the average of the month.

NOTICES TO CORRESPONDENTS.

Mr. Critchett's Hunterian oration shall be inserted in the following number. A private communication will be sent.

Mr. C. B. Rose's paper on Displacement of the Scapula has been received, and will have early insertion.

Dr. Kirkes's contribution next week.

National Medical Annuity Society, and others.—

It is not our practice to send reporters to meetings of this kind; but our pages are open to fair abstracts of the proceedings.

Mr. Smith, Belper.—The second communication has reached us.

A Country Subscriber, "D."—We do not know the address. Letters should be addressed to Messrs. Longman and Co. Paternoster Row.

Royal Infirmary for Children.—The paper has come to hand.

Corrigenda.—In the leading article of last number, page 508, col. 2, line 11 from foot, for "after," read "before the date."—Page 508, col. 1, line 9 from top, for "these courses," read "three courses."

AN
ADDRESS,

Delivered before the Members of the Hunterian Society, February 20th, 1850.

BY GEORGE CRITCHETT, F.R.C.S.

Surgeon to the Royal London Ophthalmic Hospital, Assistant-Surgeon to the London Hospital, &c.

Introduction—Variety of subjects open for discussion in medical science—Best mode of investigating medical truth—Illustrations—Examples drawn from local remedies—1st, Mechanical support—Its extensive application—2d, Catarrhal ophthalmia—Its treatment—The light it throws upon diseases of mucous membranes in general—Also upon inflammation of the skin, &c.—Examples drawn from constitutional remedies—Mercury—Its action in tritis—Its power and limits in inflammation generally—Other inferences in the treatment of disease drawn from observing various forms of ophthalmia—Conclusion.

It may perhaps seem strange to a superficial thinker, that any Society should so far legislate for futurity as to require from its members an annual address: it may appear to such an one an almost inevitable result that the subject matter of such discourses must become diluted, if not exhausted, the thoughts more and more feeble, scanty, and monotonous, until at length the vast outpourings of mind shall have exhausted the wide expanse of science, and there will remain not one unflooded spot where the orator may make his stand, or fairly claim the attention, or enlist the interest of his audience. But such reasoners know but little of our profession, its wide range, its constant discoveries, its continual growth, its aspirations after yet greater things; still less are they cognisant of the resources and energies of mind, ever remodelling, blending, originating,—the highest type, the most glorious emblem of the Infinite from whence it springs, and the vindicator, in the inexhaustible variety and originality of each separate mental manifestation, of the limitless resources of creative power. As reasonably might the traveller, as he toils up the snow-capped mountains, expect that the glorious view that rewards his efforts will ere long reach its utmost limits, and that a higher altitude will reveal to him some barren waste that now lies beyond his gaze; whereas he learns that the higher he ascends the more gorgeous and expansive is the scene, and that the beauties even of

limited in their extent and their varied combinations only by the visual powers that are given to man.

It must, then, I think, be admitted that the founders of an annual address to be delivered before the members of this valuable and time-honoured Society were actuated by a well-grounded confidence in the vast resources of medical science, and the power of the human mind: they felt assured that in the recesses of every cultivated medical mind there lie concealed germs of thought, fresh and original, stores of observation and well-grounded principles, which, if they can be disentangled from prejudices and conventionalism, and the tram-way of early education, and moulded into some clear and tangible form, well merit the thoughtful reception of such a society as this. Still, gentlemen, whilst I most fully admit the wisdom that enacted this annual address, I cannot help feeling some embarrassment in presenting myself before you as the individual selected for this responsible duty on the present occasion. I cannot refrain from asking myself with serious misgivings whether I have anything to offer that merits the attention of such an assembly as this. I can only claim your indulgence, and offer you what I believe to have been useful to myself. In the few observations which I am about to make I shall endeavour constantly to bear in mind that this is essentially a practical Society, that I am especially addressing myself to those engaged in the practical exercise of their profession; and, therefore, even at the risk of seeming dry and prosy, I desire to dwell almost exclusively on familiar and practical points. I believe each of us to be placed in a position to observe some facts and form some principles which may be useful to his fellow-labourers, and that those attached to large public institutions, who have a mass of disease passing in continuous and rapid succession before the mind, must retain some impressions worthy to be recorded. I feel, then, that I shall best fulfil the intentions for which this annual address was instituted, if I simply and truthfully bring before your notice a method of investigating the effects of certain remedies, and a few practical hints respecting them, which have suggested themselves to my mind in the course of my own practice.

The method of investigating scientific truth first suggested by Bacon, whilst it has worked out such brilliant results for many branches of science, has accomplished comparatively little for medicine. So much difficulty and uncertainty must ever beset the accumulation of medical facts, that the inductive method of investigation leaves our art the obscure empiric

ricial thing it finds it. Unless, then, we can give to such facts a higher value, a wider range, a more extensive influence, than the ordinary inductive process justifies, we must remain in a great measure stationary, and practise often by hazard rather than upon principle. I submit, therefore, that, in order to advance in our knowledge of treatment, and to form correct and scientific principles of action in our contest with disease, we must cause facts to go through a kind of mental process whereby they may be expanded into principles, and generalised so as to give them a wider practical range: they should pass through a kind of mental vitalising laboratory: they go in dead facts,—they must come out living principles: they go in unproductive and barren,—they must come out germinating and fruitful: they go in chaotic, without form and void,—they must come out clothed in symmetry and order: they go in contracted in their nature and limited in their influence,—they must come out expanded in their calibre and boundless in their application. It is only in this way that the practitioner can arrive at definite and correct principles in the administration of the various remedial agents he possesses. The want of this forms his chief embarrassment in the present day. Much progress has been made in diagnosis: he can often detect with great precision the nature and extent of deep-seated and obscure disease. Neither is he wanting in many elements that exert a powerful influence over the body, both in health and disease; but that which he lacks is a few simple principles upon which he may securely rest for guidance. When contending with some formidable disease, through which system is he to act, the nervous or the vascular? Is he to endeavour to diminish or to increase the powers of the system? Is the disease under the control of medicine, or must he remain passive, and simply watch and palliate? It is upon the decision of such questions as these that the calm self-reliance which every practitioner of medicine ought to possess can alone be securely based. It is not in multiplying the power or increasing the number of his remedies, but rather in their judicious application, that he needs light. Most of us will, I think, readily admit that herein lies our chief difficulty, and an age will not suffice for the accumulation of such an amount of authentic facts as will furnish the inquirer with satisfactory answers to such questions. It is only by the process I have already hinted at, by giving to a few facts a wide influence,—by generalising upon limited data,—that such principles can ever be arrived at. And if, in the following imperfect illustrations,

I can succeed in bringing out clearly one such principle, or even indicating the path whereby some abler mind may work it out, I shall indeed feel I have not delivered this address in vain. Who shall venture to estimate the value of one spark of genuine truth when applied to medicine,—how genial its influence on he who ministers and he who suffers,—how all-pervading is its power,—how enlightening is its essence,—a ray of the divine revealed to humanity? To what thing animate or inanimate can we compare it? Even the most precious of earthly jewels but feebly shadows it forth. Like that gem, it ever glitters in unchangeable lustre; it often remains scattered in the dark places of the earth, and hid from our view for ages; it requires all the concentrated powers of nature for its formation, and can be developed by no efforts of art; it can only be shaped and modified by a similar essence, or exhibit its lustre when freed from the crudities in which it lies buried; and, like the fabled power of the diamond, it absorbs luminous rays only that it may shine forth and light man onward in his midnight hour of obscurity and doubt.

Analogy seems to teach us that, whilst we have almost endless manifestations of diseased action, the laws that regulate life both in health and disease are few and simple. The deeper we penetrate into Nature's operations the more evident does this truth appear. Liebig has shown us how many of what used to be thought the more intricate functions of the human economy are produced by a plain and very intelligible chemical process. Schwann has taught us how the various forms of living bodies are developed through the agency of simple cell-growth; and analytic chemists, whilst they are by degrees reducing the number of elementary bodies, are of opinion that a further reduction will still be made. Thus analogy seems to teach us to look for uniformity and simplicity in the laws that regulate disease and the action of remedial agents. How, then, shall we get at some of these laws? Simply by endeavouring to ascertain the action of any given remedy upon a part superficially placed, and therefore readily observed, and draw from thence a clue to its *modus operandi* in every similar structure when similarly affected, in whatever part of the body it may be found; or,—to state in other words the proposition I am now anxious to explain,—to substantiate and to illustrate "if any medicine, or class of medicines, can be shown to exert a special influence upon any given texture of the human body when subjected to diseased action, we may legitimately draw the inference that such medicine exerts a like influence over every simi-

lar texture in every part of the body." This law may be applied both to local and general remedies, and will perhaps be best explained by a few practical illustrations; and, first, I will select one or two examples drawn from local remedies.

It is found, after experiments too numerous and too evident to admit any legitimate doubt, that, when the lower limb is in a state of chronic inflammation, with or without ulceration, that the accurate adaptation and nice adjustment of mechanical support to the entire leg removes it more speedily, more certainly, and more completely than any other method, not even excepting long-continued rest. We find, moreover, that this is the case even when the inflammation is of a specific character, whether strumous or syphilitic, when mere rest and position exert little or no influence upon the disease; and even more than this, I have had numerous examples of the fact that disease cannot establish itself in a part that is, as it were, protected by the power of mechanical support. I have a gentleman now under my care whose legs I for some years past have been regularly in the habit of strapping, for severe varicose veins, and a tendency to ulceration when unsupported: he is also the subject of a severe form of lepra, of many years standing, which has at different times invaded every part of the body, with the exception of that portion of the lower limbs which was subjected to support, and in that there has never been the faintest trace of the cutaneous eruption. We thus arrive at the law, that mechanical support, when properly applied, excites a peculiarly salutary influence upon chronic inflammation and ulceration of the lower limbs, not only restoring a healthy circulation through the part, but protecting it from the invasion of a constitutional disease. What, then, is the legitimate extension that we may safely allow ourselves to make of this law? We may generalize somewhat in this manner—"Every part of the human body suffering from chronic inflammation, if it be so placed as to render the application of mechanical support practicable, will be similarly benefited:" this I have repeatedly verified in the treatment of chronic inflammation and ulceration about the fingers, the arm, the trunk, the groin, the mamma, in orchitis, in diseases of joints, in periostitis, &c., and did time permit I could quote cases that have occurred in my own practice, in which this law has thus been extended with remarkable success to all the structures I have just enumerated; and were it possible to extend the same treatment to ulceration of the cervix uteri, to a varicose state of the hæmorrhoidal and the spermatic veins, similar benefit might be

expected; but the peculiar situation of such parts preclude this remedy: hence their intractable nature. Perhaps it may be thought by some that I am here insisting upon a very obvious extension of a well-known law; this may be true, yet it serves to illustrate the point I am seeking to establish; and however clear it may seem to some, I have abundant reason to know that both the law and its various extensions are still utterly disregarded by a large body of the profession, and even at some of our leading hospitals. We may generalize still further upon this law: we find it useful in many cases of subacute inflammation and ulceration, more particularly when it possesses that distinctive character to which the term of irritable is applicable, some striking cases of which I have published; it may even be used with advantage in acute inflammation, when of an erysipelatous type: gentle support is here often a useful adjuvant. Thus we see how wide a range one simple principle of local treatment may be made to take in its application to disease, and how much of solid and satisfactory result is obtained from fully carrying out the law I am now endeavouring to illustrate, and how securely and safely we tread so long as we advance in this manner. Let us now take one more example of the way in which we may safely generalize in the use of a local remedy. The conjunctival mucous membrane of the eye is frequently the seat of a form of inflammation to which the term catarrhal ophthalmia is applied, the distinguishing symptom of which is the secretion of a thick muco-purulent matter; this disease, though very prone to resist the ordinary antiphlogistic treatment, and to continue in a modified form for a considerable length of time, yields with remarkable rapidity and certainty to local astringents, and more especially to a mild solution of the nitrate of silver: here we have a fact of daily observation, how far may we generalize upon it? In the first place, the eye is occasionally the seat of another disease, somewhat similar in its nature, but infinitely more severe in its symptoms, and dangerous in its results, called purulent ophthalmia, one of the most rapidly destructive of all ophthalmic diseases: this used formerly to be treated by repeated and extensive general bleedings, often to syncope, but without permanently influencing the disease, which under such circumstances invariably destroyed the sight. I have also seen mercury given so as to salivate the patient, without any effect beyond an aggravation of the symptoms: by an extension of the plan found so useful in the simple catarrhal form of inflammation, and by increasing the strength of the solu-

tion to a degree proportioned to the formidable character of the disease, we can now almost with certainty so far control this inflammation as to save the sight. A very similar disease, both in its symptoms and in its results, is frequently met with in new-born infants: it rapidly yields to the same treatment, but if neglected it but too often proves fatal to the sight. We seldom pass many weeks without meeting some melancholy example of the want of knowledge of this simple law in the treatment of this disease; I have known the grey powder given, a leech applied, poultices ordered, all being worse than useless; whereas I have never known a solution of alum or of nitrate of silver fail in curing the disease, provided it was properly and frequently brought into contact with the conjunctival surface. But we may go a step further. There is another membrane of a very similar character liable to purulent inflammation,—I mean the urethra, when the seat of gonorrhœa: analogy here teaches us, in spite of all that has been said to the contrary, that injections of the nitrate of silver must act favourably in this disease. Our highest modern authority on this subject (Ricord), strongly advocates this plan of treatment, and my own experience fully confirms me in this opinion. We hence learn, too, the very important lesson, that antiphlogistic treatment, and especially mercury, exerts no permanently salutary influence over the mucous membranes when inflamed, but is, on the contrary, decidedly injurious in its effects by lowering the vital powers of the system. It may be thought that I am now generalizing too freely and too extensively, but I believe the induction I draw from what is observed in the conjunctival mucous membrane is philosophical and true, and that it will be found that the lining membranes of the bronchi, the intestines, the bladder, &c., when inflamed, are but slightly benefitted, if at all, by the most active antiphlogistic treatment, and, being beyond the reach of local stimuli, are usually very slow in regaining a healthy condition, and often become permanently altered by such attacks, morbid anatomy showing us a thickened villous and granular condition in all protracted cases of inflamed mucous membranes. Highly important as these results are, we may safely carry on the same mode of reasoning still further. We know how close a relation exists between the mucous membrane and the skin; how gradually and almost imperceptibly the one is shaded off into the other, and how close a sympathy exists between them when either is diseased. How probable, then, that the skin should be found to be amenable to the same remedies as the mucous membranes, and such

is found to be the case. In erysipelatous inflammation of the skin I can most confidently affirm, from repeated experiments, that the quickest, surest, and most effectual mode of treatment is to cover the part with a strong solution of nitrate of silver. In the asthenic creeping form of this disease it is almost a specific, and in nearly all forms it is a very useful adjunct. I think the profession is much indebted to Mr. Higginbottom for having recommended this plan of treatment. I am somewhat surprised it is not more generally adopted by medical men, and I trust that the mode of reasoning I am now advocating may ultimately lead to its more extensive use. It seems to me that we may catch some further hints from reflecting upon the simple fact that some forms of inflammation are to be cured by local stimuli. It is probable that, as such affections are due in the first instance to some impression made upon the nervous system, so they may be arrested most effectually by acting upon the same system, rather than by the more common method through the vascular. This opens out a wide suggestive field, and may ultimately yield important results. One or two indications we may already trace, to which I will briefly allude.

In that form of ophthalmia to which the term "strumous," for want of some better, is applied, one of the most prominent and distressing symptoms is intolerance of light; and, to such an extent does this prevail, that the little sufferer forsakes all its childish pursuits, all the ordinary mobility and restlessness natural to its age, and, in the intensity of its dread of the faintest ray of light, remains for many hours together during days, weeks, and even months, with its head completely buried in a pillow. Seeing the local effect of nitrate of silver in controlling inflammation and nervous irritability, it has been suggested to paint the external surface of the eyelids with this stimulant, or some other application similar in its effects, such as the tincture of iodine, and the experiment has been attended with remarkable success, and has thereby justified this method of reasoning. It has recently been suggested to treat some of the spasmodic and inflammatory affections of the glottis, whooping-cough, &c., by a direct application of caustic, and, it is stated, with great success.

Having now worked out these two examples of generalising upon local remedies, I must pass on to a few instances of the same mode of reasoning when applied to medicines that act through the general system; and here the process becomes more difficult, and the results more obscure and uncertain. I can hardly expect to obtain

entire assent to the inductions I make. They will, however, serve to show the method I pursue, and which I imagine I have found useful, and enable others to work out results for themselves, if the plan recommend itself to their minds.

In these illustrations I propose still to draw my examples from diseases of the eye, partly because its textures are very varied, partly because I am necessarily somewhat familiar with this subject, and partly because the progress and results of disease, and the operation and effects of remedies, may be more distinctly traced in this beautiful transparent little organ than in any other part of the body. I will first take the well-known disease, syphilitic iritis. The symptoms are familiar to most of us: the pain is slight; there is a pink zone of vessels round the cornea; but the prominent feature, and that to which I am particularly anxious to direct your attention, is the effusion of lymph which rapidly becomes organised, and, if the disease be allowed to pursue its course unchecked, spreads itself over the entire surface of the iris, glues its fibres together, from thence covers the capsule of the lens, forms adhesions between the two, and thus closes the pupil and renders the organ useless. This may be taken as the almost inevitable result of a case of syphilitic iritis when entirely neglected. How, then, must we treat it? Ordinary antiphlogistics are generally useless, sometimes positively injurious. Experience has most clearly shown that, for this formidable disease, mercury is the one remedy than we can depend upon, administered freely and fully, so as speedily to affect the system; and, if there is one medicine more than any other that merits the name of a specific, it is this mineral in iritis. As the medicine begins to act upon the system, the lymph, although it may have become organised, may be seen rapidly disappearing; the iris resumes its brilliancy, and often its mobility, and the sight becomes clear. Here, then, we may be said to possess a fact palpable and unquestionable, and one that every ophthalmic surgeon is continually verifying in his own experience. A treasure, such a fact as this, if we can only draw from it all the positive and negative inferences that it will legitimately bear. We seem justified, then, in coming to the conclusion that all those structures that effuse organisable lymph on their surface when inflamed will be most speedily restored to a healthy condition by mercury,—as, for instance, the serous membranes, the lungs, periosteum, and bone, &c., all of which experience confirms; and we may infer negatively that the power of this remedy does not extend beyond this point; that, as we have already had cause

to see, in inflammations of the mucous membranes and skin, in traumatic, rheumatic, gouty, and strumous inflammations, all suppurative diseases, &c., this remedy is not only useless, but often most injurious; but upon this we must now seek some further information. Let us, then, return to our transparent organ the eye, and investigate some other of its diseases. We will now take the cornea. We find it liable to primary and secondary affections. The disease called *corneitis* is its most common primary affection: it is attended with but little vascularity; but this transparent body is gradually made to resemble closely a piece of ground glass. One eye is usually attacked at a time, but the second seldom escapes. It is found most commonly in young adults; and, for the time it lasts, it destroys useful vision. I have often known mercury given, and have myself administered it for this affection, and have found it utterly useless. I have even seen the sound eye become involved in the disease during the time the patient has been under the influence of this medicine. It may be fairly taken as a specimen of a class of disease that pursues a certain course, produces certain results, and then spontaneously subsides, leaving no trace behind. The eye, too, is subject to a rheumatic or gouty form of inflammation, sometimes attacking the sclerotic coat and secondarily the iris, sometimes involving the deep textures and humours of the eye in a most destructive disease. In neither of these affections have I found mercury of any use; and in the latter, in which the disease moves on with slow painful certainty, spoiling one texture after the other, and utterly destroying vision, I have repeatedly had occasion to observe how completely this mineral has failed in arresting it, even for a day, and has often seemed to me rather to hasten its progress, the tendency of mercury being to do harm when it does not effect good. Again, the eye is often subjected to severe injuries—punctures, lacerations, wounds of iris and lens, and sometimes rupture of the entire globe: under such circumstances the pain and inflammation are often exceedingly intense and prolonged. Here, again, mercury is constantly given, so as freely to affect the system, but, as far as my observation goes, without in the slightest degree relieving the symptoms; and it is certainly much to be regretted that a patient should be subjected to so severe a process with so slender a chance of benefit. The inflammation is a salutary effort of nature to repair a breach: the transparent media, if wounded, must for ever remain opaque, and the pain is an inevitable result of the sensitive character of

the organ, and is best relieved by warmth and opium.

Again, perhaps I need hardly say that in all forms of strumous ophthalmia mercury is decidedly injurious, aggravating every symptom, and impairing the powers of the constitution.

If we now generalize upon these facts, we arrive at some important practical results: we see that it is a serious error to adopt the impression that mercury is a universal remedy for inflammation of all textures, and of each specific character, and that it is of the utmost importance that we give to it its true limits, and ascertain its real powers. In gout and rheumatism, except when it attacks serous membranes, it is of little avail unless when given as a purgative. But it is especially to the subject of traumatic inflammation that I would draw your attention. I believe the facts we observe in injuries of the eye may be safely applied to fractures and other injuries occurring in every part of the body. Analogy teaches us not to expect the same advantage from mercury in traumatic inflammation; and, if it really cannot control it, it must seriously interfere with the reparative powers of nature. In cases of injuries to the head, concussion of the brain and spinal cord, fractured ribs, wounded cavities or organs, injured joints, &c., I cannot help thinking the habit of giving large and repeated doses of calomel, sometimes almost in anticipation of inflammatory action, exerts little or no influence upon the traumatic disease, and renders recovery far more tedious and protracted; for every careful and impartial observer must admit that there should exist some imperative necessity, and some very obvious prospect of advantage, ere we can be justified in subjecting a patient to the serious ordeal of a mercurial course. I hardly know a more pitiable object than a person suffering from severe ptyalism, and months and even years elapse before all the effects entirely pass away. The late Mr. Liston, and other high authorities, have raised their voice against the use of this mineral in traumatic inflammation. I have seen it administered freely in an immense number of such cases, and, as I believe, most unnecessarily, and I have seen some very severe injuries recover most satisfactorily without it. It is only by extensive statistic research, and by comparing a large number of cases of a somewhat similar nature that have been subjected to both methods of treatment, that the truth can be arrived at; and I trust I have urged enough to justify such a trial. Mercury must certainly be ranked among the most valuable of our remedial agents; but, like most great powers, it may be wielded

for good or for evil, and it is of the utmost importance that we define its limits, that we ascertain where it controls disease, and where it is useless, and that, ere we administer it, we have some well-grounded assurance that the disease is of such a nature as to justify us in subjecting our patient to the influence of this drug.

I will now once, and for the last time, question nature in her morbid works, and endeavour to derive therefrom some practical results in the general treatment of disease, still keeping to ophthalmic inflammations. The point I am now anxious to arrive at is the condition of system in which disease is most likely to be set up, and to commit the greatest ravages. How far will ophthalmic surgery help us here? In the purulent ophthalmia of infants the disease frequently proceeds with fearful rapidity; the cornea ulcerates, the iris protrudes, and vision is destroyed. I have known all this to occur in a few days; but I have invariably observed that such results are found in ill-developed, puny, and often seven-month infants. Again, one of the most severe and intractable forms of ophthalmia attacks females after prolonged lactation. Again, in the more severe affections of the cornea, in those cases in which we have ulceration on both surfaces of this body, with pus poured into the anterior chamber, with threatened penetration, or where we have pus between the layers of the cornea, it will almost invariably be found that, from some cause or other, the powers of the system are at a low ebb; and that, however acute and severe the attendant inflammation may be, we combat the symptoms best by a tonic and often a stimulating plan of treatment. I have frequently had cases under my care in which I have just been in time to save the organ by this sudden and complete change of treatment; and I have seen every symptom subside, and the ulcer fill up and heal, as the system regained its power. This important fact was first pointed out to me by Mr. Tyrrell, and is clearly stated and amply illustrated in his work on Eye Disease; and if this gentleman had left to the world nothing beyond this one truth, he would well deserve the gratitude of the profession. If such cases are treated by antiphlogistic means, or mercury is given, as the abstract symptoms, according to the prevailing notions of treatment, would seem to indicate, the result is most fatal. But we have another curious and striking illustration of the fact I am now anxious to prove: there are certain well-marked cases of specific iritis attended with rapid and extensive deposit of lymph in the anterior chamber, in which the constitution is so debilitated that, though the disease pro-

ceeds with more rapid strides than usual, our great specific, mercury, fails us, and aggravates instead of controlling the symptoms. Mr. Dalrymple brought this subject before the profession in a paper he published a few years ago, in which he described some cases of syphilitic iritis that had occurred to him in practice, in which mercury quite failed him until he had restored the constitutional powers. Mr. Dixon has alluded to the same circumstance in two lectures he gave upon Iritis at the Ophthalmic Hospital. I have myself had some striking cases confirmatory of this fact. I will mention one that is well marked. A young female came to me at the hospital with the anterior chamber of the right eye half filled with partially organized lymph. She had been under previous treatment, and was, at the time I first saw her, under the influence of mercury, which was evidently rather accelerating the progress of the disease. She presented every sign of extreme debility—moist and pallid skin, feeble fluttering pulse, soft, flabby, impressible tongue, &c. I immediately discontinued the mercury, gave sarsaparilla, and a generous and even stimulating diet; and, when the patient had regained strength, I gave mercury in a mild form and dose, with the best result; the iris ultimately completely regaining its transparency, and the eye its vision.

I also had an opportunity of seeing a case that occurred at the London Hospital under my late senior colleague, Mr. Andrews: it was a severe case of syphilitic iritis in a man about 40, of intemperate habits and a broken constitution. Mercury was freely given: the mouth was affected; still more lymph became effused; the dose of the mineral was increased, and the man was kept in a prolonged salivation, but the disease did not subside until it had destroyed the integrity of the organ.

All these facts seem to point in one direction, and have a most important bearing upon general pathology: they throw a new light upon this subject, and are subversive of the ideas generally entertained respecting acute inflammation in its more aggravated forms; they certainly seem to prove, as far as one organ can prove, that the worst forms of inflammation, those attended with the most severe and acute symptoms and the most formidable results, occur in constitutions worn down and weakened, and are only to be controlled by sustaining the powers. Can this be true of the eye, and not of the body generally? Can we have a law for the one that does not apply to the other? If not, surely this teaches us a very important lesson: it suggests well-founded suspicions that our notions about excess of action and power

in acute inflammation, and our active and repeated depletions, are founded in error, and are replete with mischief; that it is when the constitution is at a low ebb that it is least able to resist the access of disease, or to combat its effects when it is once established; that there is a constant tendency to throw it off, if only the powers of nature are upheld, and that, when we superadd to an active and overpowering disease an equally active and exhausting treatment, we considerably diminish the resources of nature and the chances of the patient: hence the favourable statistics of the expectant school; hence the progress that is made in the public mind by the disciples of the infinitesimal school. Men were not prepared for the fact that many serious diseases subside spontaneously: the ophthalmic surgeon knows it; for he sees it daily, and it is a lesson the profession must learn sooner or later, and find out when their patients recover because of, and when in spite of, their treatment.

But time warns me that I must bring these observations to a close. I have endeavoured to show, from illustrations chiefly drawn from ophthalmic disease, that it is both safe, philosophical, and instructive, to generalize upon any well-observed fact, and that we may thus get at the powers of a medicine, not only ascertaining what it will accomplish, but that which is equally important, what it will not effect,—thus preventing its useless exhibition. I have especially selected mercury as one of my examples, because I believe it to be the remedy perhaps the most valuable and the most abused,—the most capable of accomplishing great results and of inflicting serious injuries,—that we possess; and because I was anxious to state my views upon this subject. I have further dwelt upon this mineral, in order that, however much others may differ from me, I may at least originate a useful train of reflections in their mind; and I cannot but indulge the hope that the mode of investigation I have suggested may produce useful results, and that a few solid, enduring, and widely applicable principles may be thus seized,—principles that the practitioner may cling to when surrounded with difficulties, whereas he may light his lamp as he pursues his way from the clear and palpable into the obscure paths of internal disease, when everything depends upon the next step he takes, and the life of his patient perhaps hangs trembling in the balance. In such an hour all must feel anxious; but he who has the one polar star of sound principles to guide him, will stand firm: it will be to him as the magnet, rejecting all the baser things, and only drawing to itself the true metal.

It comes not within the range of probability that the day should ever arrive when the power of therapeutics will surpass that of disease: as the science of morbid anatomy advances, it rather points the other way, and suggests that slow processes of degeneration and decay are constantly at work in the frame, over which no medicine can exert any permanently salutary influence—as, for instance, in the fatty changes that invade the various important and vital organs. The utmost that we can ever hope from the science of medicine, in its most palmy state, is that it shall enable its professors thoroughly to fathom disease, to know its true history, what course each form of it will run, when it is amenable to treatment, and upon what principle that treatment is to be conducted,—when it may be expected to subside spontaneously,—when, in a word, we can assist Nature, and when we are likely to thwart or impede her efforts,—when, also, it is to be regarded as altogether beyond the reach of art and the powers of nature. We may also fairly hope that the various causes of disease may be one day fathomed, its secret springs disclosed; and thus the medical man, if he cannot remove disease, may accomplish that which is at least as important in its results to humanity,—destroy many a fruitful source of pestilence, and promote the sanitary condition of the people by preventing disease rather than by curing it. He will then look down upon the enemy with which he is daily called upon to grapple from a proud scientific eminence: he may not, indeed, be able in all cases to subdue his foe; but he will understand him: he will know when, where, and how he may safely make his attack, and when he is to be a looker on; he will have no misgivings as to whether he is fighting with, instead of against, disease; he will repose calmly upon scientific principles. What a contrast does not this offer to the present position of our profession! How much stumbling in the dark, how much blind empiricism, necessarily besets our path! for one case in which we clearly act upon some well-grounded principle, and tread securely, how many occur in which we grope along in doubt and obscurity, and, it may be, oftentimes interfere with, rather than assist, the efforts of our great teacher, our great co-adjutor, Nature!

What a toilsome anxious thing is, and has ever been, the life of a medical man! What constant wear of mind and body—what fearful meetings, by night and by day, with disease and death—what alternations of hopes and fears—what painful uncertainty—what a load of responsibility—no cloud by day or pillar by night to guide

his steps! Still he toils on, ever labouring to clear the world of some of its scourges, to calm pain, to subdue disease, and sending forth from time to time bright original thoughts and true principles of action that have caught their tints from nature, and that give to our profession all the lustre and all the glory it has or ever can possess,—seeming to resemble the bright red clouds of evening, which, having caught their gorgeous colour from the setting sun, have spread themselves over the vast canopy of heaven, still shining redly and beautifully long after the great luminary from whence they caught their hue has sunk below the horizon. Where shall we find shadowed forth throughout the wide range of external nature even a faint emblem of this toilsome tumultuous life?—it seems most to resemble the roaring cataract, ever rolling blindly on—no rest, no calm, no quiet,—tossing over the rugged rocks that impede its progress, and casting up from its boiling abysses bright rainbows that ever play over it in lovely contrast with the raging waters, and seem to whisper hope that the rushing torrent that now sweeps down so noisily will at some remote period smooth away the steep rocks that toss the spray from their rugged surface, and all shall once more become calm and transparent, reflecting in its bright bosom the image of surrounding nature, and typifying in its lake-like serenity that scientific millennium when doubt and obscurity shall be exchanged for certainty and light,—when anxious toil shall be replaced by cheerful occupation,—when empiricism shall yield to principles, and when the rainbow of hope and promise, which is all we now enjoy, shall melt away in the clear bright light of Nature's sun, reflecting her image in every scientific mind, and giving to our profession that proud position which its long, toilsome, benevolent, and ill-requited labours so richly merit.

METHOD OF EXTRACTING FOREIGN BODIES FROM THE NOSTRILS.

DR. HOMANS for many years had practised the following: Closing the nostril, which is free, he blows forcibly with his own mouth into the mouth of the patient, and the result is the discharge of the body. He stated that, in no case where such substance completely obstructed the passage, as beans, peas, kernels of corn, &c., had this method failed of success; but when the substance introduced was so shaped as not entirely to obstruct the passage, as a button, the air blown in might pass through and not remove the body. — *American Journal of Med. Sciences*, Jan. 1850.

Original Communications.

ON THE RARITY OF PERICARDIAL
ADHESIONIN COMPARISON WITH THE FREQUENCY
OF PERICARDITIS.BY WILLIAM SENHOUSE KIRKES, M.D.
Medical Registrar, and Demonstrator of Morbid
Anatomy, at St. Bartholomew's Hospital.*(Read before the Abernethian Society,
Nov. 22d, 1849.)*

OLD deposits of lymph, of whatever size or amount, and whether consisting of false membranes or organised adhesions, when found in the pleural or peritoneal cavities, have long been ascribed to their right cause, namely, a by-gone attack of inflammation. But when occurring in the pericardium it has been customary, until very recently, to refer to an inflammatory origin the adhesions only, not the false membranes, or *white spots*, as they have been termed: these latter have, by some writers, been viewed as inexplicable in their origin, while others have hesitatingly attributed them to some partial or inflammatory process. By the satisfactory proofs of their inflammatory origin furnished by Mr. Paget, in the 23d volume of the *Medico-Chirurgical Transactions*, all doubt on the subject seems, however, to have been removed. I need not, therefore, recapitulate the various points of evidence by which this correct view of their nature has been established; but, assuming as an admitted fact that the deposits are analogous to other false membranes, and therefore have their origin in lymph effused during an inflammatory process, I will endeavour to show that such inflammatory process, instead of being either partial in extent, or chronic in degree or duration, as has been supposed, may, at least in many cases, have possessed all the characters of an acute and general attack of pericarditis.

I found this opinion almost entirely on the varieties in *number*, *size*, and *thickness*, presented by the deposits: for these varieties seem to furnish a satisfactory clue to the changes which in course of time the deposits undergo. The simplest form in which we meet

with traces of old lymph on the pericardium is that of opaque white lines on the surface of the heart, usually following the course of the coronary vessels, and their principal divisions: co-existent with these, or even independent of them, we sometimes notice fringes of old lymph on and about the borders of the right auricle, also several small, firm, slightly-elevated granules, rather firmly adherent to the roots of the great vessels at the base. It may seem that such trivial changes as these are scarcely worthy of notice, and perhaps we should not be justified in ascribing to them any relation to a previous inflammatory process, were it not that in other cases they are frequently accompanied, as shown by Mr. Paget, by fine bands or threads of old adhesion between the great vessels, and by various sized patches of false membrane on different parts of the heart.

The patches of false membrane, or white spots, present, as already stated, considerable diversity in different cases. Sometimes we see one or two pale or whitish deposits on the anterior surface of the heart, thin, smooth, and of no great breadth, and firmly adherent to the tissue on which they are placed. In other cases they are more in number, perhaps broader, often thicker, and even separable into laminae, and now, perhaps, no longer confined to one part of the heart, but scattered irregularly over the upper portions of the organ. They may still be smooth and polished on the surface, though not unfrequently they are rough and uneven, occasionally soft and villous, or even presenting a shaggy tufted appearance: in the latter case a band of adhesion may sometimes be found connecting the mass of lymph with the opposite point of the parietal pericardium; but this is rare. In other cases, again, still more extensive deposits may be found, nearly the whole surface of the heart being not unfrequently coated over with irregular patches of whitish lymph, while considerable masses of similar deposit may be found at the base of the organ, accumulated in the spaces between the roots of the great vessels, to the walls of which they closely adhere.

Such, in outline, are the principal appearances presented by the deposits of old lymph on the heart,—appearances which seem to indicate that they have

all originated from the same source, and that their varieties are due, not to diversities in their mode of origin, but partly to the different quantities in which the lymph was poured out, and partly also, most probably, to the different distances of time at which they are examined after the subsidence of the inflammatory attack. For, in regard to the latter point, when the amount of deposit is large, it seems not improbable that the period at which the inflammation giving rise to it existed was not far remote from that at which death ensued. Such supposition derives support from some of those not unfrequent cases in which, together with an abundant deposit of false membrane, the fluid in the pericardium is found turbid, and containing flakes of recent soft lymph, while scattered points of vascularity observed on various parts, especially about the base, favour still further the opinion that the pericardium had not long previously been the seat of inflammation. When, on the other hand, the false membranes are small in size and few in number, it does not seem necessary to conclude that the preceding inflammation had been small in degree, or limited in extent, or chronic in duration; for as well as being few and small they are generally also smooth and thin; appearances which seem to indicate gradual changes in the deposits, and lead us to think that a great length of time has probably elapsed since the inflammation giving rise to them ceased. For neither in the pericardium, nor in any other part of the body, does the amount of lymph found at a remote period bear any necessary proportion to the quantity originally effused in a by-gone attack of inflammation. There seems, indeed, to be scarcely a limit to the time within which the absorption of lymph, not yet organised, can take place. The process may extend over weeks, or months, and at length the inflammatory product be more or less completely removed. Instances of this are furnished in the slow and gradual, but often complete removal of lymph from the tissue of an iris or cornea which has been the seat of inflammation. Now, what occurs in other parts may surely occur in the pericardium; and there seems no other forcible argument against the belief that the deposits of lymph on the heart in the form of unorganised, non-vascular

false membranes, may, by the process of absorption, be gradually diminished in size, and in time perhaps ultimately removed.

Such being the principal evidence which seems to justify the conclusion that the white spots or patches found on the surface of the heart originate in a true attack of pericarditis, I proceed to notice some of the inferences naturally resulting from this conclusion. The principal of these seem to be—1st. That inflammation of the pericardium is a much more common disease than would be indicated by the infrequency of adhesion. 2dly. That the general opinion concerning adhesion of the pericardium as a consequence of pericarditis requires to be modified. 3dly. That the prognosis in cases of pericarditis is less unfavourable than it would be if adhesion invariably followed.

1. With respect to the first point, I may remark that hitherto it has been usual to regard as true pericarditis those cases only in which either distinct auscultatory evidence of the disease has been obtained during life, or, in fatal cases, anatomical changes resulting from recent inflammation, or more or less complete obliteration of the sac of the pericardium by old adhesions, have been observed after death. Were pericarditis limited to cases such as these, it might indeed be considered a somewhat rare disease: but if we extend our range, and include (as we are justified in doing) among the anatomical proofs of its existence, not only deposits of *recent* lymph and organised adhesions, but also deposits of *old* lymph or false membranes, we are compelled to admit that it is a disease of not unusual occurrence. The opinion that the false membranes are the result of *partial* or *chronic*, rather than of *acute* and *general* inflammation, has very little evidence in its favour. There doubtless are *degrees* of inflammation in all parts, and the nature and quantity of the inflammatory products effused in any case are probably in great measure determined by the extent and intensity of the existing inflammation: so that when we see a part, such as the pericardium, immediately after it has passed through an inflammatory attack, we may form a moderately correct estimate of the intensity of the attack by the amount of the morbid products discovered. But if, as so much more commonly happens,

we have no such opportunity of examining the part until long after the subsidence of the inflammation affecting it, we can, after such a lapse of time, form no correct opinion respecting the amount of mischief it underwent when inflamed. For, in the case of the pericardium, supposing adhesion to have taken place, most probably only a *portion* of the effused lymph has had part in the adhesive process, the remainder having been removed by absorption; while if no adhesion has ensued, then are we still less likely to obtain a correct knowledge of the intensity of the inflammatory process; for here also much of the effused lymph has doubtless been absorbed, while the remainder can indicate nothing more than that inflammation had at some period given rise to it. And had the pericardium been examined at an *earlier* period, probably more lymph would have been found; while if at a *later*, probably less, or even none at all, would have existed, owing to its more or less complete removal by absorption.

If pericarditis be so common as is here supposed, it may naturally be asked, why do we not more frequently witness the disease during life? The question, I admit, is rather difficult to answer, yet not so difficult as at first sight it appears. From the zeal with which auscultation is at the present day pursued, the disease is probably rarely overlooked in hospital practice; and the number of cases therefore in which it is detected perhaps fairly enough represents the proportional frequency of its occurrence, at least in the course of acute rheumatism. But do the records of hospital practice, or does the experience of any diligent attendant in the wards, for a twelvemonth, show that pericarditis is of unfrequent occurrence? Of 136 cases of acute rheumatism recorded by Dr. Latham,* the pericardium was inflamed at least 18 times—no inconsiderable number. But this analysis takes no account of cases of pneumonia, pleurisy, peritonitis, continued fever, scarlet fever, and the many other febrile and inflammatory diseases which are at all times sprinkled through the wards of a large hospital. It is true that *acute* rheumatism is, par excellence, the source of pericarditis, yet abundantly testify that the pericardium may

be inflamed in the course of several other diseases besides this. The occurrence of this complication in continued fever has been repeatedly noticed; its superintention in the course of scarlet fever is a subject of still more frequent notice; while granular degeneration of the kidney is, next to acute rheumatism, perhaps the most fertile source of the disease. The tendency of serous membranes to participate in each other's diseases leads to the supposition that pericarditis may not unfrequently arise in cases of inflammation of the pleura or peritoneum, especially when the inflammation is due to a general rather than a local cause; while the analogy existing between all the exanthemata suggests that as the pericardium is apt to be inflamed in scarlet fever, so ought we more assiduously to watch the condition of this membrane in all other diseases of this class. Many facts show that pericarditis may arise without producing *any* symptoms referable to the heart; and I have no doubt the disease would sometimes be quite overlooked, even in acute rheumatism, were it not for the care and assiduity with which from day to day the cardiac region is explored. Need we, then, be surprised if it be sometimes passed by in cases, where, from the nature of the disease, such as continued fever, we are not in the habit of paying that strict attention to the condition of the heart, which in other cases is found to be necessary to the detection of pericarditis?

But even granting the rarity of pericarditis in hospital practice, it must be remembered that of the patients under care in any public institution, the majority are seen for the first and only time in their lives: we know next to nothing of their former ailments; nothing whatever of what may happen to them hereafter. We know not how many may have had attacks of pericarditis in former illnesses, nor in how many it may come on ere they die. So that we should not hastily conclude about the frequency of the disease merely from what passes before us in hospital practice. The records of diseases of children might be expected to guide us to a sounder conclusion on the subject, but I have been

not sufficient data for such
until recently this large
comparatively unculti-
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size amount of statis-

* Diseases of the Heart, vol. i. p. 1

tical information for this and other similar objects. One important fact, however, is established by the best writers on children's diseases—namely, that the false membranes on the heart are of not unusual occurrence even in very young subjects. Moreover, several fatal cases of recent acute inflammation of the pericardium are narrated by Dr. West, in his work on the Diseases of Children. Dr. West has also kindly informed me of a case which recently occurred in his practice, and in which there was abundant evidence of recent extensive inflammation of the pericardium, in a child only three months old, the heart being nearly covered by deposits of lymph.

II. If, then, it be true that pericarditis is a disease of not infrequent occurrence, the general opinion respecting the usual termination of this disease in the formation of permanent adhesion requires to be modified. Nearly all the highest authorities on this subject agree that inflammation of the pericardium, when proceeding far enough to cause effusion of lymph, terminates either in the death of the patient, or in the formation of adhesions whereby the cavity of the sac is more or less obliterated. In some of his expressions, Dr. Hope* certainly seems to imply that the effused lymph may in a few cases be absorbed, while in one important passage he remarks that "pericarditis sometimes leaves no other vestiges than opaque white or milky spots, which," as he says further on, "possibly may be results of partial pericarditis, as supposed by Laennec; but there is no reason to suppose that they may not also be occasioned in some instances by universal pericarditis." (p. 151) The whole tenor of his previous and subsequent remarks on the subject, however, plainly indicates his belief that adhesion is by far the most common event of pericardial inflammation; indeed, that, next to resolution, it is "the most desirable termination which remains" (p. 148). It is difficult to ascertain the grounds on which such acute and experienced observers, as the late Dr. Hope, and many others well versed on the subject of cardiac disease, have founded their belief in the almost invariable termination of pericarditis in permanent adhesions; and I feel com-

pelled, after a careful and attentive examination of the subject, to differ from the conclusion at which they have arrived.

With respect to the *frequency* of pericardial adhesions, we have no means of determining *anything* with certainty, except by examinations after death. It is, I think, next to impossible to feel sure, during life, whether adhesion has or has not, in any given case, ensued. The great frequency with which pericarditis is accompanied by serious affection of the valves, vitiates all conclusions derived from unnatural action or disordered functions of the heart; for with these the pericardial adhesion, supposing it to exist, may have less to do than the coincident changes in the valves. In support of such view may be mentioned those cases in which universal adhesion of the pericardium was found after death, while during life there has been nothing to give the least suspicion of its existence. Dr. Latham met with several such instances.* Compelled, then, to look to post-mortem statistics for information on the subject, let us inquire what is the evidence derived from this source? As far as my own limited observation extends, an adherent pericardium is an extremely rare occurrence. With the exception of one case in which the pericardial sac was obliterated, and the heart surrounded by an adherent plate of bone, I have not met with a single instance of it during the last twelve months, although I have examined upwards of a hundred bodies. Surely this cannot be a mere accident, for cases of all kinds die and are examined, and many of them present other unmistakable proofs of previous pericarditis.

I would here correct an error apt to arise respecting the *term* adhesion. The sense in which it is used here, and generally, in works on the subject, is that of an organized vascular structure of perfectly formed fibro-cellular tissue, more or less closely and compactly agglutinating together the contiguous surfaces of the pericardium, and thus more or less completely obliterating the cavity of the sac. An anatomical change of this kind indicates a state of things of long standing. The soft, easily-broken down adhesions found after death during a recent attack of pericarditis,

* Diseases of the Heart, 3d edition.

* L. c. vol. I. p. 108.

must be carefully distinguished from the above: they consist simply in the sticking together of the opposed surfaces of the pericardium, by means of recent soft lymph effused between them.

The evidence against the frequency of organised pericardial adhesions which is afforded by post-mortem examinations closely coincides with what reason might lead us to expect. Permanent adhesion of the pericardium seems a thing of all others least likely to ensue: when we consider that the heart by its natural movements is constantly changing its position at the rate of seventy or eighty, or even more times, per minute; that the surfaces of the inflamed pericardium are usually separated by a greater or less quantity of serum; and that, when the disease is on the decline, and the system perhaps under the influence of mercury, absorption both of the lymph and of the serum is probably in full activity, we must admit that these are conditions not very favourable to a process which obviously requires rest, contact of surface, and persistence of the organizable material. The wonder is, how adhesion ever occurs,—how, in defiance of so many obstacles, the two surfaces of the pericardium can ever become permanently fixed together. That it *may* do so is sufficiently proved in that it *does*, though the phenomenon is difficult of explanation. I can imagine two conditions, either of which may perhaps lead to the process. First, it may occur in cases characterised by a large effusion of solid lymph, and a small effusion of serum. One can conceive in such a case that a moderately firm adhesion may have time to take place before the lymph in immediate contact with the absorbing surfaces can be removed, while the thickness of the mass will favour the process by rendering the movements of the heart less effective in impeding it. Once sufficiently strong to resist the fully restored action of the heart, the tendency of the lymph to contract and become organised would cement the adhesions for ever, and render the evil irremediable.

The other condition under which permanent adhesion may perhaps ensue was suggested by a case which recently occurred in St. Bartholomew's Hospital. A man, turned 50, was admitted with rheumatic inflammation of several large

joints, accompanied with a distinct pericardial friction-sound. He was copiously bled from the arm, cupped, and treated largely with calomel and antimony, and kept under the influence of these remedies many days. His fever was completely subdued, the pericardial friction-sound entirely vanished, yet the patient got worse instead of better, and soon passed into a state of great exhaustion. From day to day he was observed to be deadly pale, bathed in profuse sweats, free from pain, but much distressed in breathing, sometimes quite gasping. His pulse was small, feeble, rapid, and irregular; the heart's action and sounds could scarcely be perceived; yet there was no unusual dulness on percussion to warrant the suspicion of copious pericardial effusion. After continuing in this state for upwards of a fortnight, he gradually sank and died. The examination of his body revealed much that was instructive. The kidneys were found degenerated. Here seemed one explanation why he never rallied, why he sank under the combined influence of an acute disease and the active remedies necessarily employed to combat it. Under other circumstances, these remedies might have saved his life; but, with an organ like the kidney extensively diseased, they seemed but to accelerate his death. The next point of interest in the examination was an universal adhesion of the pericardium through the medium of a thin layer of moderately recent lymph. The adhesion readily admitted of separation, yet the force required for the purpose was probably greater than during life was exerted by the action of the exhausted heart,—an action scarcely sufficient to give rise to a sound in the cardiac region. So far had the process of adhesion extended, that, had the man recovered, and the healthy action of his heart been restored, the surfaces probably would never have separated, and the case would thus have terminated in permanent obliteration of the sac of the pericardium; and in this way probably arise many other cases of permanent pericardial adhesions,—the condition being that, for many days after the subsidence of the inflammation, the heart should remain with its action so enfeebled as to be unable to prevent agglutination of the two approximated surfaces of the lymph-besmeared pericardium, until the adhesion has become

strong enough to resist its restored action.

In addition to what has been said respecting the rarity of permanent pericardial adhesion, it may be remarked that the very ingenuity displayed by Nature in the reparation of her damaged structures might reasonably lead to the supposition that, in repairing a mischief inflicted on the pericardium by inflammation, some more simple and less injurious method would be contrived than that of cementing the two surfaces together, and thereby irreparably crippling the movements and impeding the functions of one of the most important organs of the body. It is obvious that the formation of false membranes, instead of adhesions, is, next to complete absorption of the effused lymph, the most effectual method by which repair of the injury could be accomplished; for such false membranes, unlike organised adhesions, would probably afford but little obstacle to the ultimate removal of the greater part, or perhaps even the whole of the inflammatory products. Even supposing them to remain, as possibly they often do, they cannot be considered as very prejudicial to the functions of the heart, for we frequently see them passing into a perfectly harmless condition, becoming thin, blending with the natural investment of the heart, and developing a layer of epithelium on their exterior, whereby the smooth polished secreting surface belonging to the healthy pericardium is restored. Moreover, the heart does not seem to resent their presence; for their existence is not found attended by enlargement of this organ, unless there be coincident affection of the valves, or some other lesion, such as degenerated kidneys, whereby such enlargement may be explained.

III. On the last point little need be said; for, if what I have endeavoured to prove be true, that inflammation of the pericardium terminates far less frequently in the formation of permanent and organised adhesions than is usually supposed to be the case, the prognosis in this disease is evidently more favourable than if such results more commonly ensued. From the general opinion at present entertained on this subject, the prognosis in even the most favourable cases of acute pericarditis attended with effusion of lymph is gloomy enough; for most writers seem to agree with Dr. Hope, that "adhesion,

so far from being a *perfect* reparation, gives rise to another form of organic disease, which, in a vast proportion of cases, ultimately proves destructive to the patient.*

BED-SIDE SKETCHES.

By JOHN CHARLES HALL, M.D.

Fellow of the Royal College of Physicians, Edinburgh; Member of the Royal College of Surgeons, London; Author of "Remarks on the Treatment of some of the more important Diseases, including the principal Diseases of the Eye," &c. &c. &c.

"Concordiâ res parvæ crescant."

[Continued from p. 501.]

No. VI.—THORACIC CONSUMPTION.

[Continued.]

β Symptoms of Thoracic Consumption.

EACH stage of this distressing complaint is marked by certain well-known symptoms; these symptoms are both general and physical, and in giving an epitomized and rapid sketch of the course of *thoracic consumption*, an endeavour will be made, as much as possible, to trace the connexion between the external symptoms, local and general, and the changes which are at the same time going on in the lungs. In speaking of the pathology of phthisis, reference has been made to some peculiarities occasionally presenting themselves in the symptoms indicative of its presence: it is now proposed to consider

* Since the above remarks were communicated to the Abernethian Society, I have obtained what seems to be conclusive evidence in favour of the opinion I have ventured to express, namely, that inflammation of the pericardium, attended by effusion of lymph, does not necessarily terminate, as is commonly supposed, in the formation of permanent adhesions. A girl, aged 13, was admitted into St. Bartholomew's Hospital, about the middle of last October, for acute rheumatism, in the course of which both endocarditis and pericarditis ensued. The pericardial friction sound was distinctly audible for four or five days, and then disappeared, and the child left the hospital early in December. In less than three months, however, she was re-admitted in a state of great exhaustion, with oedematous legs, cough, palpitation, and pain in the cardiac region. She died within a fortnight; and, on examination of the body after death, the only evidence of the pericardial inflammation four months previously was the existence of numerous vascular tufts and fringes of fine cellular tissue about the base, and of several patches of equally fine and vascular tissue spread over the surface of the heart, especially in front. There was not a trace of adhesion between the opposed surfaces of the pericardium.

the more common form of thoracic consumption, as we see it every day presented to our notice.

a. Period the first.—The patient complains of shortness of breath, particularly when walking up a hill or running up stairs, and a sense of tightness is felt across the chest. Fleeting pains are also experienced, and on arising from bed in the morning the patient coughs once or twice; in a few weeks he coughs also on going to rest, and next he does so two or three times during the day; there is seldom any expectoration, and if present, it is too slight to occasion any alarm either to the patient or his friends, and the cough is so slight that no attention is paid to it. By degrees this cough increases, especially in a morning; there is a tickling sensation in the posterior fauces, from which the expectoration appears to come; this expectoration is now more abundant, it consists of a transparentropy fluid resembling the saliva; throughout the disease it is always more abundant in the morning, but gradually the cough is accompanied by the same kind of expectoration during the day. The pulse is now accelerated, particularly after dinner, and in an evening,—a desire to creep to the fire is experienced, and an unpleasant chill, followed by some degree of febrile heat, is felt: the sleep is no longer sound and refreshing, and is often interrupted by cough.

On looking at the patient, his face presents a true index of his condition: to the experienced physician consumption is no

“Silent cheater of the eye;”

for the aspect of the countenance exhibits the tuberculous cachexia; the face is pallid; the colour comes and goes; after fatigue it is singularly expressive of languor; the skin is often dry, the elastic feel natural to health vanishes; the muscles are no longer firm; a degree of emaciation becomes evident, and the shoulders appear more forward than natural.

Sometimes, on an amendment of the general state of the health, depending on change of air, increased warmth of the weather (for the duration of phthisis depends much upon the period of the year at which the invasion takes place), or other causes, all these symptoms diminish in severity: this is often the case in the spring, and in the summer

they nearly disappear, and the patient and his family become convinced that there is no cause for further apprehension. Delusive dream! fallacious hopes! With the cold weather comes a fresh attack of catarrh, and then all the symptoms, already described, return with much increased severity.

Languor, debility, dyspnoea, slight hectic fever, night sweats, cough, emaciation, more or less, may be said to constitute the *general signs* of the first period of thoracic consumption. What are the *physical signs* at this stage of the disease? and we must keep in mind, that if death should take place at this time, the lung will be found to contain a greater or less quantity of tubercles, the greater portion of which will be of a greyish colour, and to a trifling degree transparent; others will be of a pale yellow colour, and opaque. The bronchial membrane and pulmonary tissue will probably be found little changed in appearance, or at most presenting the signs of increased vascularity. On examining the chest, the supra, or infra-clavicular depression, will often be very apparent; any depression on one side of the chest only is always a symptom exciting the deepest anxiety, and the examination which follows too often confirms the fears which the first glance of the eye has communicated to the mind.

On firmly placing the fingers under the clavicle, and very gently tapping with the middle fingers of the right hand, *percussion* will generally detect a want of resonance in the affected part, particularly if the patient be requested at the same time to take a deep inspiration, and to hold his breath; the unsound lung being less distended with air than the other, as a matter of course, will exhibit more or less (comparative) dulness. This want of resonance is one of the earliest types of consumption; the only way in which a mistake could be made would be in a case, such as that which occurred (we think) to one of the physicians at the hospital at Brompton, where, in a patient labouring under subacute bronchitis, the infra-clavicular region emitted a dull sound on percussion, evidently from an accumulation of mucus. In sounding the chest, the movement should be made from the wrist, and not from the elbow; and we may here perhaps be permitted to repeat the advice given to ourselves, by that great and good physician whose

pupil it was our good fortune to be for many years, the late Dr. Hope—"never in the first instance examine a diseased subject: first learn the sounds natural to a healthy chest." If students would condescend to take this advice, how greatly would their task be lightened, and how much better stethoscopists would they become.

The stethoscope, however, supplies the most accurate knowledge of the actual condition of the lungs; the changes produced in respiration will vary in almost every patient, depending as they do upon the extent and position of the tuberculous deposit, and the condition of the surrounding lung.

One of the most frequent signs is a *prolongation of the expiratory murmur*: the murmur of expiration is actually prolonged, but sometimes inspiration being shortened the expiratory murmur, by comparison, appears longer than it actually is; but whether the expiration be really or only relatively prolonged, it is a most characteristic sign of the existence of tubercles, and one that has not been dwelt upon so much as its importance merits. It arises either from the deposition of the tuberculous bodies causing a mechanical obstruction to the free passage of the air from the lungs, or from a want of contractility in the pulmonary tissue, the capacity for inspiration being at the same time diminished by the imperfect expansion and decreased capacity of the lung. Prolongation of the expiratory murmur, and weak, jerking, bronchial respiration, will be the leading evidences afforded on the application of the stethoscope over the part of the lung suspected to be the seat of tubercle.

Thoracic Consumption.

Pain most commonly at the sides, and between the shoulders.

Cough often dry at first, and without expectoration.

Morbid sounds.—Upper lobes of the lungs. *Hæmoptysis*.

If, then, percussion yields a dull sound at the apex of one lung,—if there be an increase of the expiratory murmur,—if the breathing be feeble or rough,—if these signs be attended with undue resonance of the voice, a click, a catch, or any kind of unnatural noise when the patient respire, coughs, or talks,—if these sounds are always pre-

When, on applying the stethoscope to the apex of the lung, the respiration is found to be remarkably feeble, we invariably place the instrument an inch or so lower down the chest; by degrees the sound becomes louder, and as we approach the centre, or a little below the centre of the lung, the sound has become of the natural intensity; it is true this weak sound may be, and often is, a healthy peculiarity, but then it is the same on both sides, and in all parts of the lungs; we therefore venture to repeat that an evident difference in the force of the respiratory murmur in several parts of the chest, is presumptive evidence of the existence of tubercle, more especially if the sound is weak at the apex and increases in degree as we listen in descending towards the middle of the lung.

Any variation from the natural sounds peculiar to expiration and inspiration always demands our anxious consideration, and *weak, puffing, rough, bronchial, respiration* are all symptoms of tubercles. These signs of phthisis require no illustration in this place: they are all produced by the hindrance which exists to the proper expansion of the lung. The jerking respiration is a very common and a very early type of thoracic consumption: there is at this moment in the Hospital of the Sheffield Workhouse a patient in whom the inspiration, although but little altered in intensity, has for some months past occurred in irregular puffs; the sound is now becoming more harsh. In its earlier period of invasion thoracic consumption is apt to be confounded with chronic bronchitis. The leading points of distinction may be thus contrasted:—

Bronchitis.

Pain most commonly beneath the sternum.

Cough attended with expectoration from the first.

Morbid sounds.—Lower lobes of the lungs. No hæmoptysis in simple bronchitis.

sent, and if heard in the upper part of one lung only, we may fairly attribute them to the presence of tubercles.

Hæmoptysis is another symptom always to be witnessed with much dread, for should it occur in a person who has not received any injury to the chest, without disease of the heart, or a disordered state of the uterine functions, in

the great majority of cases tubercles will be found in the lungs: although hæmorrhage most undoubtedly might, by diminishing the vital powers, render an individual in a condition favourable for the development of tubercles, still we are bound to consider pulmonary hæmorrhage the *result*, and not the *cause* of the presence of tuberculous matter in the lungs. Cases of amenorrhœa and accidents to the thorax being excluded, Louis did not meet with one case out of 1200 of hæmoptysis, except in such as were labouring under thoracic consumption. The report of the Hospital at Brompton shows how frequently it exists, more particularly in the first period of the disease, and that to an extent which very clearly proves its value as a highly characteristic symptom of this stage of phthisis.

Loss of voice is ever an alarming symptom. The mucous membrane of the larynx ulcerates, and this scrofulous ulceration only takes place when the lungs are filled with tubercles. We have before our eyes the case of a gentleman in whom this was well-marked, although the disease in the lungs did not appear to have advanced beyond the first stage. In 180 persons seen by Louis, after death from various chronic diseases, he only examined one with ulceration of the larynx; but in those who had been carried off by thoracic consumption, *one in five* had ulceration of either the larynx or epiglottis, and nearly one in three had ulceration of the windpipe. If, then, the secondary effects of syphilis be excepted, ulceration of the larynx is almost peculiar to thoracic consumption.

Louis remarked that ulceration of the epiglottis was often latent, and afforded no appreciable token of its existence. The symptoms we have noticed are, a pricking and burning sensation at the superior portion of the thyroid cartilage, with rejection of liquids through the nose: the tonsils and pharynx present no visible alteration. Slight pain, and some peculiarity in the voice, attend the first invasion of the larynx; permanent loss of voice, and deeper pain, denote the more advanced mischief to the interior of the larynx. We are not aware of any sign which proves the trachea to be ulcerated.

In the very early stages there is sometimes present a sound which is most audible posteriorly in the supra-spinous

regions: it is only heard during inspiration, and has been called pulmonary crumpling. It is difficult to describe, but the idea it conveys of the lungs is that of their expansion under difficulty. M. Fournet has likened it to the crumpling of tissue paper.

With regard to bronchophony, when it is present there is either consolidation of a portion of the lung, by which the voice is conveyed to the surface, or a bronchial tube is enlarged. It must be remembered, however, that it is in the vicinity of the clavicles, and in the supra-spinous regions, that its value as a sign of phthisis is to be estimated. The side on which it is heard is also of importance. If it be in excess on the left side it is unquestionably morbid; on the right side it is not so important. Bronchophony is generally present when the first period is passing into the second, and is generally accompanied by bronchial breathing, but this is not always so.

b. Second period.—The first symptom marking an arrival at the second period of this disease is a singular change in the appearance of the expectorated matters. The colourless frothy expectoration observed during the first stage is changed. This expectoration is now seen to contain little yellow bodies of opaque matter. These gradually increase, and in the end appear like so many patches, surrounded by a transparent froth, in which they seem to swim. Streaks of blood frequently appear at this time. The hæmoptysis may vary, amounting in some cases to only a faint streak, while in others we have seen a considerable quantity of pure unmixed blood coughed up.

All the symptoms already enumerated next increase in severity. The cough is frequent, permitting little rest to the patient by day or by night; the feeling of cold chills on an evening is more frequently complained of; the succeeding feverish heats are more constant, and the perspirations more regular and copious; the respiration is hurried, even when the sufferer is at rest; the languor and sense of fatigue is greater day after day, and the loss of flesh more apparent; the slightest exertion, either of mind or of body, causes great distress; the muscles are flabby; the face, pale when he awakes in the morning, is tinted with a crimson flush as the day declines, and frequent pains in the side,

called rheumatic, are now often most annoying. The period of softening has arrived, and these pains are often the result of the uniting process which is commencing, for the pleura covering the diseased portion of lung generally becomes adherent to that of the ribs. At this period tubercles are generally deposited in the lower portions of the lung also.

An examination of the chest will easily detect the internal mischief which has produced all this evil. The upper portions are less and less freely raised; often there is more evidence of disease on one side than on the other. The infra-clavicular region on the worst side is flattened. On applying the stethoscope the dry crackling rhonchus already described has become *moist, mucous, or bubbling*. Subcrepitant râles are heard; rapid decomposition of the tuberculous matter is evidently going on; and there is sufficient proof of having reached the second period of thoracic consumption.

c. Third period.—Violent perspirations; almost daily attacks of diarrhoea; increased emaciation and debility; distressing cough; painful dyspnoea, aggravated by the slightest exertion; œdema of the feet and ankles; the shoulders raised and brought forward; the clavicles prominent, having a deep hollow between them and the upper ribs; the flat instead of the rounded chest of health; the dragging upwards of the thorax if the patient attempt a deep inspiration; the loss of bodily power; the decay of the mental energies,—all, with solemn, and not to be mistaken certainty, tell us that we have arrived at the last period of this frightful disease,—that death is inevitable, and that the grave will soon close over the sufferer. *Sufferer!* Some may consider thoracic consumption a disease that causes little pain. No greater mistake can exist. We feel satisfied few diseases are more trying and distressing.

We shall not dwell at length upon the physical signs present at this period. Percussion over the cavities gives a dull sound, although less than before. This arises partly from the existence of the caverns in the superior portion of the lungs, partly from the wasted condition of the parietes rendering the sound less dull than at the preceding stage.

The respiration is in some parts obscure, in others not to be heard; while, in one part of the chest, it may be very clear: the character of it will then be bronchial, tracheal, or even the cavernous respiration described by Laennec. If the patient be asked to cough, a gurgling is heard (*gargouillement*), and pectoriloquy more or less distinct, and more marked in all probability on one side than on the other, will be heard. Whenever pectoriloquy is heard over a cavity, cavernous respiration may also be detected. Cavernous respiration resulting from a cavity may often be heard when pectoriloquy,—a sign, in our opinion, of very uncertain importance,—cannot be detected. Why? Because either the excavation is too small, too far from the surface of the chest, or not adapted to reverberate the voice. Sometimes, when pectoriloquy may be absent, and gurgling, from a want of access to the bronchi, is not very clear, if the patient be asked to cough, a splashing sound becomes very apparent. We have asked a patient to hold his breath for a moment, and then with each beat of the heart it has become very distinct. The contraction of the heart causes a little agitation in the cavity; and, if the contents be thin, the splashing sound is very easily heard.

It remains to consider the treatment of thoracic consumption.

Sheffield, April 1850.

[To be continued.]

HYSTERICAL CONVULSIONS.

A most violent case (that of Eliza J—), of several months' duration, produced surprise by complete recovery, after a variety of treatment had appeared to fail. Her paroxysms were exceedingly active and distressing, and recurred often six or seven times in the day, resembling very much in appearance the attacks of epilepsy.

The protean character of hysteria was illustrated in Mary L—, who suffered alternately with functional disorder of the stomach, with vomiting and hæmatemesis; of the brain, with delirium: of the spine, with the ordinary convulsive affections; and, at different times, also, amaurosis, which was for a year complete in one eye, and was then transferred to the other.—*Notes of Hospital Cases, by Dr. Hartshorne, in American Journal of Med. Sciences, Jan. 1850.*

MEDICAL GAZETTE.

FRIDAY, APRIL 5, 1850.

THE Preface to the Regulations of the Society of Apothecaries is a document of some importance to those who commenced their medical studies with the winter session just expired. Its publication at the present time, proves that the Society have almost abandoned the idea of legislative change in the constitution of the profession; while its contents show that they are just as eager to improve medical education as if their existence as a licensing body had not even been threatened. The few pages before us embrace an outline of the most important defects in the present system of education, with suggestions for their removal. Among the topics especially referred to, we find,—a preliminary classical education,—the apprenticeship system,—oral examinations by teachers,—the study of practical chemistry and clinical medicine,—and lastly, the evils of the grinding system.

It is desirable that the views of the Society on these subjects should be as widely diffused as possible, and firstly of the preliminary education—

“Of the candidates who have been unsuccessful in their examination before this Court, a very large proportion have owed their rejection entirely to their inability to translate selections from Celsus and Gregory; whilst many have exhibited such a total ignorance of the Latin language, as to be unable to render into English either the *Pharmacopœia Londinensis*, or the prescriptions of physicians. Moreover, many of the candidates who have passed this preliminary portion of their examination, have, during its subsequent progress, evinced the most lamentable deficiency in their previous education, by their inability to define the meaning of the professional words and terms they have

employed. The Court, therefore, again most emphatically recommend the attention of parents whose sons are intended for the medical profession, to the importance of a well-conducted preliminary education; and they would also urge the necessity of the utmost circumspection in the choice of those to whom the instruction of youth is committed.

“In accordance with recommendations published many years since, the Court consider that the pupil, before he enters upon his medical studies, should possess a competent knowledge of the Classics, so as to be able to translate any easy Greek or Latin author; and that he should also be acquainted with the elements of Mathematics and of Natural Philosophy, and should acquire one or more of the modern languages, French, German, or Italian.”

It has been a frequent subject of complaint that the apprenticeship clause of five years' service was a bar to a good preliminary education. Had it been rigorously enforced by the Society, there would have been some ground for the charge; but the clause has been for many years liberally interpreted in favour of the student. The following are the present views of the Society regarding the term of apprenticeship:—

“The Court have always regarded the term of apprenticeship required by the Act of Parliament of 1815 as a period of study to be employed by the pupil, under the superintendence of a practitioner, not merely in dispensing medicines, but also in attendance on Lectures and Hospital Practice: and they have felt justified, after careful consideration of the clause in the Act relating to apprentices, in giving to it this enlarged and liberal interpretation. In repeating their opinion at the present opportunity, they are induced to hope that parents, in selecting the practitioners with whom they place their sons, and in the arrangements made between them, will bear in recollection that the Court do not require a servitude of five years to practical pharmacy, but that they recommend every possible opportunity to be afforded to the pupils for their moral, intellectual, and professional advancement.

The Court would also state their conviction that an apprenticeship, although it may be liable to abuse, offers to the young student very valuable opportunities for the acquisition of practical professional knowledge, and of business habits; that it is by no means incompatible with a sound medical and general education; and that it affords, in addition, the necessary and wholesome restraint of moral discipline."

We have already expressed our opinion respecting the recent changes in the curriculum.* For reasons there assigned, we cannot altogether approve of them. The "prescribed order" of study, upon the efficacy of which the Court of Examiners appear to place so much reliance, is in our opinion a mistake; and its enforcement is one of the causes of the success of the grinding system.

We do not understand why a prescribed order of study should be specially required of the candidates for the Apothecaries' license, when the University of London, the Royal Colleges of Physicians and Surgeons, the Army and Navy Boards, as well as other licensing bodies, exercise no control over the periods selected by the student for attendance at particular courses of lectures. Such a system is either necessary to the candidates for other diplomas, or it is not required by the candidates for the Apothecaries' license.

Of the propriety of enforcing attendance on lectures, and of instituting oral examinations, there can be no doubt.

"The Court having found, during their long experience, that the period intended to be devoted to attendance on Lectures and Hospital Practice has in some instances been misemployed by the students, it is gratifying to them to notice the efforts made in some of the medical schools, to introduce a better system of discipline than that which has hitherto prevailed: and they would impress upon all teachers the necessity of enforcing, by such means as they may

think most advisable, a punctual and diligent attendance upon their respective classes; and of ascertaining the progress of their pupils in the different departments of medical science, *by means of frequent oral examinations.*"

On Practical Chemistry, and Clinical Medicine, we find the following remarks:—

"In the department of Chemistry, the Court would remind the student that he is now expected not only to attend the Lectures on that subject, but to bring evidence that he has himself performed a series of chemical manipulations; and that he is required to prove his practical knowledge of this science by re-agents and other means which will be placed at his disposal in the examination room.

"The Court are deeply impressed with the great importance of Clinical Medicine, in the literal meaning of the term. They would therefore especially urge the student to devote much time to bedside practice, and the examination of the actual phenomena of disease; and they would also recommend him to make copious notes, under the superintendence of the physicians, of all cases which come under his notice in the hospital."

We have already made some remarks on the subject of Practical Chemistry as it is likely to be affected by the new regulations;* and we may here add, that from information which has reached us, no teacher of this subject will be recognized, who is not connected with some *Medical* school. The object of this rule is to ensure the proper teaching of *Medical* chemistry. The proposed practical examination for the license will, if properly carried out, put an end to the work of the grinder in this department of medical science.

On the grinding system, we find the following observations:—

"The experience of the Court having convinced them that many of the candidates who come before them are superficially prepared for the examination, by a system which professes to teach in a

* MEDICAL GAZETTE, Vol. xliv. p. 112.

* Ibid.

few months a mass of medical knowledge which can be duly acquired only by the diligent study of many years, they are induced to offer a few observations upon the subject. In the system of oral examination and catechetical instruction they see nothing objectionable: but, on the contrary, innumerable advantages: they are therefore most favourably disposed to any efficient course of private tuition, carried on in connexion with the lectures and hospital practice; but they cannot too strongly express their opinion, that such tuition should be extended over the greater part or the whole of the student's career, and not be adopted for the mere purpose of passing an examination for a licence to practise.

"The prevalence of the system of *grinding*, as it has been called, appears to the Court to be in a great measure attributable, in the first place, to the neglect of those who receive apprentices, and whose duty it should be to teach at least the elements of medical science; and, in the second place, to the want of that cordial co-operation at the medical schools, between the recognized teachers and the pupils (as evinced by continual personal intercourse, and repeated oral examinations), which is absolutely essential to a proper medical education. In the opinion of the Court, it is by no means sufficient that the student should merely *hear* the discourses delivered from the Professorial Chairs; but it is essential that he should be also called upon to show that he *understands* them. This can be efficiently proved only by means of frequent examinations, which give to him a facility of expressing his ideas, promote in him the habit of logical arrangement, and fix deeply in his mind the principles of science."

In our view the Court of Examiners have altogether overlooked the true cause of the success of the grinding system. Those who receive apprentices are, generally speaking, quite incompetent to impart that information which is here required from a candidate for the license; and admitting that there has been in some instances a want of cordial co-operation between the teachers at medical schools and their pupils, this want has neither created nor encouraged the system of grinding. A student who may

not have the means to pay the fee for unlimited admission, either attends the lectures in the "prescribed order," or with only an occasional attendance, he succeeds in procuring a signature to his schedule. Three years elapse, and he finds himself deficient in Chemistry and Materia Medica,—the "prescribed order" not allowing him to attend these courses (or to procure an available certificate for his attendance) except during the *first* session! His knowledge of the subject may have faded from his memory. He has then the option of a second entrance to the lectures, or of going through a series of lessons at the hands of a grinder, who by his experience in the routine mode of examination hitherto pursued at the Hall, undertakes to qualify him in all branches of medicine, of which a knowledge is required for the Apothecaries' license. There can be no doubt that a student will select the grinder in preference to his former teacher, as the latter does not profess to adapt his system of teaching to the readiest mode of obtaining the Apothecaries' license. The Apothecaries' Society appear to forget that when an ill-informed candidate can procure their license as a mere result of grinding, there must be something very defective in their mode of *examination*. The appointment of Clinical Instructors in many of the principal schools has to a great extent abolished the system of extra-mural grinding; and it now remains for the Society so to improve their method of examining candidates, as to render the attainment of their diploma, as a mere result of any kind of grinding, impossible.

ABSENCE OF THE UTERUS.

ON examination of the body of a female in the hospital at Berlin, the uterus was found wanting. She had never menstruated, was chlorotic, had been married four years, but never experienced any sexual desire. The vagina terminated in a *cui de sac*. X

Reviews.

Transactions of the Medical and Physical Society of Bombay. No. IX. For the years 1847-48.

THE first article in this number of our Oriental contemporary is by Dr. Kinnis, Deputy Inspector-General, H.M. Forces, on the *Medical Statistics of Hong Kong and Chusan*. This is, perhaps, rather laboured and heavy in its details, and owing to the tables being constructed from the returns simply, would lead to some very erroneous conclusions. There are recorded 81 deaths from diarrhoea, and 6 from catarrhus acutus, whilst there are only 38 from dysentery, and 1 from consumption!* The writer tells us, moreover, that acute dysentery, in the form which it assumes in India, was comparatively rare; but in this, too, we think he is in error. See a Statistical Report on the Diseases of India, in the MEDICAL GAZETTE, 1849, vol. xxxix. p. 7. Or we may at once refer him to the documents in his own office, relative to H. M. 17th regiment in Colaba in 1840, or to a report on the same by Dr. Thomson, in the fifth or sixth number of the Society's Transactions. He must be right in his totals, however; and a fearful rate of mortality they exhibit during the first two years. The third year (1846-7) was more favourable; but looking at the localities, and particularly that of Stanley, we cannot but anticipate similar untoward occurrences. Are there no more eligible sites for cantonments in Hong Kong than those which have been selected? Dr. Kinnis's papers, notwithstanding their defects, are deeply interesting, not only to the scientific men of the profession, but also to the authorities in whose hands the health of our soldiers is placed.

The second article we shall notice is by Dr. Morehead, formerly secretary to the Society. This essay on *Diseases of the Brain*, he tells us, is in continuation of former papers in the Society's Transactions. Dr. Morehead, probably from the situation which he held in charge of the General European Hospital, where most of his patients were strangers to him, would seem to have

fallen into the good old system of getting clear of difficulties by referring them to intemperance. This is to be regretted, as these diseases, in India certainly merit a much more patient and philosophical investigation than they have hitherto received. Dr. Morehead, it is true, admits other causes in conjunction with high temperature; but the evil in giving an undue prominence to intemperance is, that it takes away the attention from the true prophylaxis: to wit, light and loose clothing, the head well protected, with cold affusion every morning where practicable, and temperance. The mistake is easily committed:—a soldier goes on pass in the hot season, or a sailor on shore, and it is probable that both may be proved to be intemperate;* he drinks something most probably in the Bazaars; feels exhausted when he returns, or lays down by the way and falls asleep, where he is found insensible, with stertorous breathing, and then, without farther evidence, the whole is attributed to intoxication.†

The following case came to our knowledge:—A man was reported to have died of intoxication. There was no external mark of violence whatever, and yet a very extensive fracture was found over the occipital and right parietal bones, with a coagulum underneath nearly the size of the hand. There was a coroner's inquest in consequence, but the occurrence remains a mystery to this day. This man was a great drunkard, too, but he was seen sober only about an hour before.

We have here been speaking of the more acute, but there is another class of cases of an insidious or chronic character, the effects of repeated exposure, or of continued high temperature perhaps without exposure. Who, in a hot climate, has not, indeed, experienced in himself a growing intolerance of exposure in the sun? Some have thought that the large venous sinuses lose their elasticity, and that repeated congestions are followed by repeated reaction, sometimes amounting to sub-acute inflammation,

* We say may be proved, for there is something very consolatory in the idea that a neighbour has died from some fault or peculiarity which we fancy we ourselves do not possess.

† The same remark will apply to Mr. Carter's paper, page 36, opium being to the native (Indian), what spirits are to the European. The error arises perhaps from the term—"Stroke of the Sun"—implying a sudden blow, whilst in the majority of cases this is not admissible.

* See MEDICAL GAZETTE, 3d August, 1849, page 190.

until either the vessels, the brain, or its membranes, are so injured as to give rise to apoplexy, palsy, or amentia. The last is more frequently, however, a sequel of fever,—temperance or abstinence may, no doubt, retard, but cannot insure immunity.

The hot skin, mentioned by Dr. Morehead, with evening exacerbations, and morning remissions, loaded tongue, and pulse 110 to 120, is certainly neither delirium tremens, palsy, nor apoplexy; and we doubt not he may yet find, at malarious stations at least, that the employment of leeches and cold affusions in the exacerbations, and of quinine in the remissions, will be the most successful plan of treatment after all.

As for delirium tremens, we know two old India regimental medical officers of H.M. Service, who never saw a fatal case of delirium tremens. The fact is, soldiers, in well-disciplined regiments at least, are not such great drunkards as they are assumed to be.

The next is a long article by Dr. Murray, on the station of Satara. Its extreme length may be deemed one of its most remarkable features. We can easily fancy Dr. Murray, however, reclining on his couch, under the shadow of a well-thatched bungalow, whilst from year to year he sings of the salubrity, sublimity, and beauty of Satara and Mahabuleshwar. To the invalid from the low countries seeking for a more temperate climate, this paper will be full of interest.

There are some minor articles of value, particularly in the Appendix, but we must here bring our notice to a close. The volume is most creditably got up, and the paper and type are excellent.

On the Nature and Elements of the External World; or, Universal Immaterialism fully explained and newly demonstrated. 8vo. pp. 269. London: Churchill.

It might seem, at first sight, that a metaphysical disquisition is alien to the objects of a journal devoted to practical medicine; but a slight further consideration will show that a question involving points of the highest importance in reference both to the physical and moral world cannot be devoid of interest to those whose vocation is immediately with both.

The author, conceiving that Berke-

ley's explanation of his proved doctrine was not sufficiently explicit, undertakes to defend it by such a full and clear explanation as shall place it within the reach of the most ordinary understandings. In his introductory remarks he refers to some of the reasons why Berkeley's doctrines have not met with general reception; and then proceeds to notice the proof it affords of a constant superintending Providence, of the existence of an Almighty Spirit, and of the immortality of the soul. The introduction closes with remarks on the character of Bishop Berkeley.

In the first chapter the author gives his "exposition of the question:—in this the common and the philosophic opinions of the nature of the external world are given, and a brief statement of Berkeley's opinions is added.

"You admit," contends Berkeley, "that it (*e. g.* a chair) is not composed of the feels and colours, shapes and sizes, of the chair, but that it is something else in the chair, quite different from these, and quite perceptible to the senses. I deny that there is any such thing in the chair.

"I not only say that it is contrary to common sense to suppose that there is any invisible material substratum in the chair, when you perceive no trace there of such a thing, but I also say that it is contrary to common sense to suppose that the shape and size which I see and feel in that chair are not in identically the same place as the feels of it and the colours of it. I say, for my part, that the shape and size are qualities inherent in the feels and colours, and exist with them in the mind."

Such is the scientific principle which the author proposes to explain and defend—"that the whole sensible universe can exist only within mind, and that the universe has not a material substance (different from all the things that we perceive) constituting any portion of it." (p. 21.)

The principle upon which these two points are made out is as follows:—

"Mathematical and scientific demonstrations place it beyond all doubt that colours are sensations, and therefore subsist only within the substance of our minds. Our senses teach us that the colours of visible bodies are identically in the same place in which the visible bodies are. Common sense forbids us to deny this. Therefore, all the visible bodies in the universe subsist only within the substance of our minds" (p. 22).

The following is an outline of the demonstration by which the author proposes to show the physical impossibility of the thing :—

"The material substance cannot, from its nature, subsist within the mind.

"The universe has been shown to be within the mind.

"Therefore, the material substance cannot, from its nature, subsist within the universe, or, with it, within the mind" (p. 23).

The author next obviates a few misconceptions of Berkeley's doctrines. The chief of these is that his opinions expressed a denial of the existence of an eternal world. This the author here, and repeatedly elsewhere throughout the volume, most emphatically repudiates. The author, in the same and following chapter, relates the various misrepresentations of this doctrine by British, French, and German philosophers.

The author, by notice prefixed to the volume, offers a prize of one hundred pounds to any one who shall successfully refute his arguments and destroy his demonstration. Herein, moreover, the author, although he deems it fit to remain anonymous, has invested his work with a sort of temporary personality.

As preliminary to his demonstrations, the author in his third chapter lays down, and argues at greater length than we can follow, the three following propositions :—

"1. That the existence of matter is not self-evident.

"2. That it has not been proved, or even rendered probable, by argument.

"3. That there is no necessity for any such hypothesis as that of a material substance" (p. 129).

In the subsequent portion of his work the author defends Berkeley's demonstration, and adds two new demonstrations on his own part. From the nature and extent of these demonstrations, we cannot furnish our readers with sufficiently extended extracts to enable them to judge of their validity. Were we, therefore, to attempt so to do, we should only mislead our readers, and do injustice both to the subject and to the author. Suffice it to say, that so far as, in so abstruse and complicated an inquiry, words can be used to conviction, the arguments are apposite and cogent;

the demonstration, if not complete, not easily refuted.

We commend this volume to the close and diligent study of those among our readers who may entertain no dread of going *ultra crepidam*.

Proceedings of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, March 26, 1850.

DR. ADDISON, PRESIDENT.

A Case of Gun-shot Wound, and subsequent Extraction of a Bullet from the Bladder.

By E. M. MACPHERSON, Assistant-Surgeon in the 9th Lancers. (Communicated by JAMES DIXON, Assistant-Surgeon to St. Thomas's Hospital.)

A PRIVATE in H. M. 24th Regiment was wounded (at the battle of Chillianwallah, on the 13th of January, 1849) in the left buttock : severe pain was immediately felt in the testicle on the same side : the ball could not be found, but the wound healed without difficulty : no blood was ever noticed in the urine. Symptoms of disturbance of the bladder shortly afterwards set in, which not yielding to remedies the bladder was examined, and a foreign body detected ; and on the 30th of August the lateral operation, as if for the removal of a calculus, was performed : an iron ball was extracted, which had become encrusted with a thin layer of sandy deposit. To the above case Mr. Dixon added notices from various writers of fifteen operations for the extraction of balls ; which had either primarily entered the bladder, or, having lodged in the immediate neighbourhood, had made their way into its cavity. Mr. Dixon had been favoured by Mr. Cusack, of Dublin, with a notice of a similar operation performed by him, and another by the late Mr. Colles, neither of which has been published : in three cases extraction was not attempted, or was unsuccessfully tried, the bullets, forming nuclei of stones, having been found in the bladder after death ; in one case the bullet was small enough to be voided by the urethra. The situation of the external wound in the cases cited was very various. The time that elapsed between the infliction of the wound and the removal of the ball varied from a day or two to ten years. The lateral operation was performed in the majority of cases,

but the high operation had been employed by Baudens on account of the ball having entered at the bottom of the linea alba, so that by enlarging the recent wound he could reach the cavity of the bladder.

A case of Suppuration in an Hydatid Cyst of the Liver, in which the Abscess opened through the lungs, and one in which hydatids were expectorated. By THOMAS BEVILL PRACOCK, M.D., Assistant-Physician to St. Thomas's Hospital.

THE first case was that of a female, 20 years of age, who was a patient at the Royal Free Hospital in August 1848. When first admitted she presented the ordinary symptoms of the form of bilious remittent fever then prevalent; but, after a partial recovery, she was suddenly seized with violent pain in the right side, dyspnoea, and suffocative cough, soon followed by expectoration of matters which had a deep bilious colour, and very fetid odour, and was evidently derived from an abscess in the liver. She sank on the 37th day after her admission; and, on examination, a large cyst, containing a thick purulent fluid, with a collapsed acrophalocyst, was found in connection with the upper surface of the liver, and had perforated the diaphragm, so as to come in contact with the lower portion of the right lung. The lung was extremely consolidated, and in places gangrenous. Two other cysts were found in the liver, and one of these had also suppurated. The fluid in the other was deeply tinged with bile.

The second case was that of a man, 31 years of age, who had for some months been a patient at the City Hospital for Diseases of the Chest. He had, for some time before he applied there, been much out of health, suffering from pain in the right side, with severe suffocative cough, and profuse expectoration of yellowish-coloured matter, with which were mixed shreds of membrane, which proved to be portions of hydatid cysts. He had a considerable enlargement of the lower part of the right side, and evidences of a cavity there. He continued to expectorate the hydatids for several months; but, under a tonic course of treatment, his health had materially improved; and for two weeks he had been entirely free from the expectoration, and there seemed some reason to anticipate his recovery, though the cyst, partly contracted and nearly empty, still remained.

After narrating these cases, Dr. Peacock alluded to other similar cases which had been reported, and showed that the result had, in most of the examples, been favourable.

WESTMINSTER MEDICAL SOCIETY.

March 9, 1850.

PROFESSOR MURPHY, PRESIDENT.

On the Connections of Uterine and Ovarian Disease.

In reading a paper on this subject, Dr. TILT inquired, why should the prognosis of uterine disease be more difficult than that of the diseases of other organs? Why should very slight uterine lesions be sometimes attended by intense reaction? Why should it happen that, when patients are cured of these lesions, they still continue to suffer as much as they did before? Dr. Tilt stated that many of these cases might be explained by the co-existence of ovarian with uterine disorder, the first disease being masked by the symptoms of the other, or else having supervened during the course of uterine disease. After dwelling on the anatomical unity of the generative system, and also drawing attention to the unity of purpose by which the different organs of that system are characterised, he affirmed that, as the ovaries transmit to the uterus, and receive from it, a physiological stimulus, so they can transmit to, and receive from the uterus a morbid stimulus; and he asks, firstly—Is inflammation transmitted from the uterus to the ovaries? In proof of this, Dr. Tilt quoted the assertions of Madame Boivin, Drs. Bennet and Doherty, and stated that it principally occurred in cases of catarrhal inflammation of the cervix, as it was first pointed out by Dr. Melier, of Paris. He likewise showed that this transmission had also often followed the injudicious application of escharotics to the neck of the womb, or the employment of pessaries and stem-pessaries, which he (Dr. Tilt) strongly deprecated.

2dly. Is inflammation ever transmitted from the ovaries to the womb? Dr. Tilt, starting from the acknowledged fact that the ovaries induce periodically a state of vascular turgescence of the walls of the uterus, then showed how this action is perverted in that form of dysmenorrhoea which is attended by a secretion of false membranes from the uterine surface; and he afterwards gave cases to prove that ovarian irritation, when of long standing, brought on those turgid, vascular, indolent swellings to which Professor Recamier has long since given the name of "erectile tumours;" and he alluded to an assertion lately made by Dr. Forget, of Paris, that the neck of the womb contained erectile tissue,—a fact hitherto unnoticed. Dr. Tilt concluded by giving the following case:—

A married woman, 35, was admitted

a patient at the Paddington Free Dispensary for Women and Children. She was small in stature, of a sanguine constitution, and she had been married three years without issue. She complained of pains in the abdomen, of a slight discharge, and of dysmenorrhœa, with either a profuse or a scanty flow. On examination, we caused little pain by pressing the ovarian regions. The neck of the womb was sound in every respect. Considering that the general health of the patient was in fault, we gave opening medicine and tonics, and ordered injections with a solution of alum. This treatment was continued several weeks: the general health improved, the discharge almost disappeared, but the pains in the ovarian regions became worse, and dysmenorrhœa increased. We ordered inunctions with mercurial ointment, and poultices to the inguinal regions, and the pain abated; but a fortnight afterwards leucorrhœa reappeared, with pain in the back; and, on a second examination, we found an ulceration of the inner surface of the cervix, which was outwardly red and swollen. We therefore admitted having taken a wrong view of the case: it was an ordinary case of ulceration of the neck; so we cauterised it with nitrate of silver, then with the acid nitrate of mercury, and lastly with potassa fusa. Such was the treatment employed during the space of eight months, the patient being sometimes better, at others worse, and sometimes remaining without treatment for the space of three weeks. The ovarian pains likewise varied; but three months ago, finding that they were very intense, being augmented by walking or pressure, and tired by the pertinacity of the case, we made an exploration per anum, and found the ovaries swollen and very painful when touched. We immediately changed our plan of treatment, and ordered ten leeches to each inguinal region, and the regular rotation of blisters and ointment, besides cold enemata twice a-day. The pains subsided, the leucorrhœa stopped, and a few weeks afterwards the neck of the womb was merely congested, but offered no ulceration. After the following menstrual period we ordered a repetition of blisters, leeches, and ointment; and now the cervix is sound, the ovaries painless, and the patient well.

In this case we think that ovaritis produced the inflammation of the neck of the womb, and kept it up until the primary disease was discovered and energetically treated. Now it seems to us that, if our explanation holds good, it will throw light on some of the anomalies of uterine pathology.

Dr. Tilt, in conclusion, observed that in Dr. Murphy's cases, as in his own, we

could not cure the disease of the womb, because beyond the womb, preceding the womb in the development of the organs of reproduction, and governing them through life, are the ovaries, which often participate in and cause that uterine inflammation which we alone attack; and thus, while we cure the small visible lesion, a hidden one remains, to bring on relapses, and to perpetuate the patient's sufferings. In the treatment of those painful states of the neck of the bladder so often caused by diseases of the kidneys, we depend much less on direct applications to the neck of the bladder than we do on those means by which we can attack the kidney, the diseased organ. Should we not be governed by the same logic in treating diseases of the organs of reproduction?

LIVERPOOL MEDICAL AND PATHOLOGICAL SOCIETY.

Feb. 21st, 1850.

Paracentesis Thoracis. By Dr. GEORGE F. EASTON.

JAMES CALLUM, aged 26, of temperate habits. His father, and a brother and sister, have all died of affections of the chest, probably phthisis, though this cannot be accurately ascertained. His mother is still alive, at the age of 80, and he has two brothers and a sister.

He had good health till the month of May last, when he had a smart attack of fever, accompanied with bronchitis, which lasted about a fortnight. He resumed his occupation too soon afterwards, in an open shop; but, as his cough did not get much, if at all worse, the inconvenience it occasioned was too trifling to induce him to desist from work. By and by, his breathing became affected; but the difficulty of respiration was so gradual in its progress, and the symptoms of pleuritic disease so insidious, that its true cause for a long time escaped detection. About the beginning of September it was discovered to result from an accumulation of fluid on the right side of the chest. About the middle of the month it had risen as high as the nipple; and, notwithstanding the use of medicine, its progress was unrestrained, till at the commencement of October it had reached the clavicle. He was kept for some time under the influence of mercury. Blistering and other remedies were employed; but, after remaining in a hospital nearly three weeks, he left without experiencing any benefit.

As no prospect remained of the fluid

being removed by absorption; as the prolonged use of medicine, which had no apparent control over the disease, was more calculated to do harm than good, by still further deranging his general health; as the dyspnoea was great, and no success could be expected from an operation performed at a much later period, on account of his obviously declining strength, it was resolved to undertake it without delay. To the ordinary symptoms of fluid in the pleura there was superadded another, indicative of the complication of the disease with pneumothorax,—an audible fluctuation produced when the patient was shaken, by the splashing of the fluid against the walls of the chest.

A consideration of the uniformly fatal issue of those cases in which this unfavourable symptom owes its origin, as it usually does, to the bursting of a tuberculous abscess into the pleura, led me to propose the operation rather as a means of relief than as affording any very encouraging prospect of ultimate recovery. Profuse nocturnal sweats, from which he suffered, made me somewhat suspicious that this might be the source of the contained air; but, as I had failed to detect the presence of tubercles in either lung, I felt greatly disposed to view it in a more favourable light, as the effect of secretion.

There were two or three other reasons which assisted me in thus regarding it:—

1st. Its very trifling amount, as ascertained by percussion, any resonance which existed being confined to a small spot that could be covered with two fingers, and which varied with the patient's position.

2d. The absence of hæmoptysis and purulent expectoration.

3d. The entire absence of appreciable pain during the course of the disease.

I think we might reasonably expect, if a vomica had discharged its contents into the pleura, that its rupture would have occasioned an amount of pain sufficiently severe to mark the commencement of the inflammation which gave rise to the subsequent effusion; but no such pain was ever complained of, and the patient repeatedly told me that he had never experienced any, even of the slightest description.

The patient, at the time of the operation, had bronchitis in the left lung.

On Saturday, November 3d, in the presence of Dr. Turnbull and Mr. Higginson, who kindly assisted me, a trocar was introduced into the right side of the chest above the eighth rib, and rather more than half a pint of pus removed. In attempting to adapt an apparatus to prevent the admission of air, the canula was partially withdrawn; and, as it could not be readily re-introduced, we were satisfied for the pre-

sent with the information which was thus derived and the relief which was thus afforded. No bad symptom followed. A blister was applied to the affected side, and some cod liver oil, with a bitter infusion containing iodide of potassium, was ordered to be taken daily, preceded on the first occasion by a purgative.

At the end of a week, the dimensions of the chest having undergone no change since the operation, and the other physical signs of the disease remaining as before, the operation was repeated, and eight pints of the same inodorous purulent fluid were slowly withdrawn. This was accomplished without producing any material effect on the patient, except a disagreeable feeling which arose about the middle of the operation, and increased towards its termination, resulting from the removal of pressure to which the displaced viscera had become accustomed, and from the necessity occasioned by the collapsed condition of the right lung for their rather sudden movement in an opposite direction, to supply the vacant space caused by the abstraction of so much fluid. This lasted during the four succeeding days, and was accompanied by inability to lie on the affected side, on which he had formerly reposed with greater comfort, and by his experience as if any considerable pressure would have been attended with danger to the integrity of the ribs.

The entrance of air into the chest was effectually prevented by the use of an apparatus suggested by Mr. Higginson,* which, on account of its simple construction, its easy management, and its complete efficacy in this instance, I can recommend for employment on similar occasions, in preference to others of a more costly and complicated nature. It is simply a tube about a yard long, made of vulcanized india rubber, which being filled with water, and one of its extremities placed over the mouth of the canula, acts on the principle of a syphon. If it is properly adjusted, and the other extremity immersed in the fluid, air cannot by any possibility gain admission into the chest. The stream was free, uniform, and continuous, unaffected by the respiratory movements. To the middle of the tube was adapted an india rubber bottle, which in this operation does not appear to be essential to success, when the fluid is moderately thin. When emptied by pressure, and then allowed to expand, it may be advantageously employed to clear the tube, if the passage happens to be obstructed by lymph or coagulum, or other

* Mr. Higginson's apparatus is described in the *Lancet*, Feb. 27, 1847, p. 240, as a simple form of stomach pump, without valves or stopcocks.

small bodies of a soft and yielding nature, or to wash out the chest with water, or any of the lotions which have been recommended for the purpose. And these seem to be the chief, if not the only advantageous uses to which it can be applied.

It is generally stated by writers, that when the operation of paracentesis is performed at a stage of the disease when the lung is incapable of expanding, that the operator has a choice of but two alternatives. He must either be content with the amount of fluid he is able to withdraw from the chest before the stream becomes interrupted (which is often only a small proportion of what is left behind), or he must obtain a further supply at the expense of replacing it by atmospheric air, with the generally experienced consequences of renewed inflammation, increased and more offensive secretion, irritative fever, and too often rapid and irremediable prostration. Neither alternative is desirable: the former on account of the necessity imposed for a frequent repetition of the operation, the latter on account of the reasons already assigned. By the use of this simple apparatus both are avoided: the fluid may be almost entirely, if not wholly withdrawn; the sound lung is placed in the most favourable position for increased dilatation, and the condensed one gradually to regain its dimensions and recover its functions.

When the tube is filled, and its extremities placed in the positions I have indicated, its cavity is continuous with that of the chest, of which it may be made to form the most dependent part. The void uninterruptedly formed by the escape of the fluid at the lowest part of the tube is communicated upwards to the chest, where it will gradually increase, till the last remaining portion of the fluid has found its way by gravitation into the tube.

The patient sat during the greater portion of time that was occupied in the withdrawal of the fluid, and towards the close was lowered into the recumbent posture to favour its escape by placing the opening in a more dependent position.

The trocar used on this occasion was of the size generally employed in the operation for hydrocele. A gentle flow in this case was especially called for to prevent laceration of important structures within the chest, in consequence of there being no substitution (as in ordinary cases) of atmospheric pressure for that of the fluid withdrawn. For this reason, too, the patient was directed to breathe with ease, and warned to make no sudden or vigorous effort, which might at all subject him to the danger we have specified—a danger great in proportion to the amount of effusion.

The circumference of the chest before the operation was three feet one inch and a half; the measurement of the right side exceeding that of the left immediately below the nipple, by an inch and three quarters, and at its most prominent part by two inches. The operation had the effect of reducing the entire circumference two inches and a half—i. e., to two feet, eleven inches, the right side still preserving an increase over the left of about half an inch, which was probably to be ascribed to its naturally larger capacity. By examining the respective measurements of the two sides before and after the operation, which stand thus—

Right side, 19½ inches	} Before the operation
Left do. 17½ "	
Right side, 17½ inches	} After the operation
Left do. 17½ "	

it will be seen that the affected side measured two inches, and the sound side half an inch less after the operation than before it. This diminution of size on the sound side can be accounted for only in two ways. We must either suppose that the accumulation of fluid on the right side had by its pressure been causing distension, and permanent elevation of the ribs on the opposite side; or we must explain it by saying that the walls of the chest on the left side were to that extent depressed after the operation, in following the organs they contained in their endeavours to supply the vacancy caused on the right. The former opinion I think is scarcely tenable, and therefore I take the latter to be the true explanation.

The patient had no unfavourable or uneasy symptom with the exception of that formerly mentioned, which subsided on the fourth day. On the 11th of the month (the day after the operation) he resumed the use of his medicine as formerly prescribed. On the 13th, his tongue being furred from partaking too freely of animal food on the previous evening, he was ordered a purgative and five grains of a combination of blue pill and hyoscyamus each evening at bed-time. He was further directed to discontinue the use of the bitter infusion, for which, on the 14th, sulphuric acid was substituted as a tonic.

At the end of a week he moved about through the house, and walked up and down stairs with ease. He slept on either side comfortably and soundly, and breathed with increasing freedom. In addition to a nourishing diet, which he partook of with a relish, he was then allowed a pint of porter daily. His cough had greatly diminished; and though the sound emitted on percussing the affected side could scarcely be said to have improved, with the exception of over the sternum and a

trifle beyond it (which was then naturally clear), yet the ribs were slightly raised, and respiration of a bronchial character was heard over a large extent of surface both before and behind.

Thus he continued to improve in health, strength, and appearance, till the middle of the fifth week after the last operation, when a marked change was observed in his appearance. The weather at this time was very unfavourable, so that he had seldom been able to go outside the door. He had, moreover, been unable to procure employment in the house, so that his days had been spent in a state of inactivity, for which we then thought his diet had probably proved too stimulating.

But, whatever cause may be assigned for the relapse, it was evident that the matter was again forming. His tongue was deeply furred; his appetite had left him; he had frequent attacks of pyrosis, and there was tenderness on pressure over the intercostal spaces on the affected side. Recourse was had to purgatives, and several counter-irritant applications — such as blisters, nitro-muriatic acid lotion, and concentrated tincture of iodine. Calomel and opium were given to affect the gums: but all without avail. The disease made steady progress: the vomitings occurred in the mornings; the tongue remained foul; sleep deserted him; the appetite did not return; the cough was greatly aggravated; the dimensions of the affected side gradually increased, and the patient became more and more emaciated.

Nor is it likely that these alarming symptoms would ever have received a check, had not the operation been timely repeated. On the 22th December, six and a half pints of purulent fluid were withdrawn in the same way as formerly mentioned. It differed from that previously removed in being of a reddish brown colour, and quite inodorous. When this quantity had been removed, the patient complained that the canula was causing pain. Attempts were made to place it in an easier position; but, instead of relieving the pain, they had the effect of so much increasing it, that, neglecting the means of obtaining a further supply of matter we had formerly employed with advantage (*viz.* that of laying the patient down to make the opening more dependent), the canula was withdrawn. By this omission a little fluid was left behind; and, by a little want of care either in adjusting or withdrawing the tube, a small quantity of air must have entered the chest, so as to render again audible the sound of splashing which had not been heard since the performance of the first operation. That the quantity was small was evident, as well from percussion as from the pa-

tient's experience of the same feeling I formerly mentioned after this as the previous operation, though not to the same extent, or of so long continuance.

The two sides of the chest afterwards measured alike.

A favourable change in every respect immediately followed the operation. His sleep and appetite returned the same day, and the vomiting at once ceased. In two days the tongue was perfectly clean, and the cough greatly relieved.

The improvement, however, was of short duration. At the end of a fortnight the vomiting and other unfavourable symptoms returned. The vomiting was so severe as to return nearly every hour, as much as a quart of acid water being sometimes ejected at a time, and was particularly troublesome at night.

On this occasion I could assign no outward cause for the relapse, as the patient had avoided all stimulants, had never left his room, and had been almost entirely confined to bed. This circumstance, coupled with an observation that the constitutional disturbance was quickly followed by an enlargement of the affected side, led me to this conclusion, — that the operation in a case so far advanced as the present one, whatever other benefit it may confer, has no effect in checking the further progress of the disease, and that the formation of pus proceeds without materially affecting the constitution until it does so after a considerable accumulation, by causing injurious pressure on the nerves and neighbouring organs.

If this be the case, then the disease is quite of a local character, not likely to yield to constitutional remedies, and may coexist and advance for a certain time (as, I think, on both these occasions it has done) with constitutional improvement. The shorter duration of the improvement on the latter than on the former occasion is probably attributable to the more rapid accumulation of the matter, partly in consequence of its less complete removal, and partly owing to the admission of air, which, by altering the character of the secretion, may have proved an additional source of irritation.

If this view of the case be the correct one, then it is obvious that a cure could not be obtained by the plan hitherto pursued, and could only be hoped for by keeping the secreting sac always nearly empty, with a view to its gradual contraction and ultimate obliteration.

Accordingly, the plan I formed was to remove the whole of the matter, wash out the right side of the chest with warm water, substitute a little clean water for a portion of the matter (as likely to prove

less irritating), to keep off the feeling of constriction, and then leaving the plugged canula in the chest to draw off a certain portion of it and the secreted fluid at short intervals; supporting the patient, in the meantime, by a nutritive diet.

This was put into execution on Tuesday, the 22d of January. That the process of washing might proceed with facility and expedition, it was thought advisable to use something larger than the small canula hitherto employed, and of a material less liable to be acted upon by the secreted fluid. For this purpose a gutta-percha tube was formed, and for its admission an incision was made into the chest with a bistoury. It was easily introduced, and we were fortunate in having made it of sufficient size. At first the matter did not flow, and we were beginning to think there must be some mistake, when out it poured of a sudden, nearly as thick as treacle, of a sickly offensive odour, and of a somewhat darker colour than formerly. With the assistance of the syphon about three pints streamed forth. The stream becoming interrupted, some warm water was thrown in to dilute it. It again flowed freely, and we calculated that about two pints more of matter were thus removed, independent of the water with which it was mixed. Two or three injections of warm water were used, and it was our intention to have continued them until the water returned nearly colourless. After injecting the fourth quantity, only a small portion of it could be got back, in consequence of the large flakes of lymph, which we suppose the water had stirred up from the bottom of the chest. The tube was plugged and secured in the opening. He complained that it gave him pain; but as it was not severe it was left in its place.

On the following day, however, we learnt that the pain in the wound had become so severe that it had been the cause of his passing a sleepless night. The tube was easily withdrawn, and a smaller one of a different shape substituted without pain in its place. By the aid of the syphon between two and three pints of fluid then came away, consisting of matter mixed with the water left behind on the previous day. Some warm water was then injected, but the same difficulty presented itself we had formerly experienced. We could not get the whole of it back. Accordingly the canula was plugged, but the patient shortly afterwards complained that it was causing pain, which soon became excessive. After vain attempts to give him relief by partially withdrawing it, the pain became so intolerable that he earnestly entreated me to remove the tube. This I was very unwilling to do, but coldness spreading over

the body, and a shivering coming on, I was afraid of his falling into a faint, from which it might be difficult to recover him, and I complied with his request. Air immediately rushed into the chest, and he experienced instant relief. The cause of the pain appears to have been, not the tube but the unequal pressure produced by the exhausting apparatus. A poultice was applied to the wound. He soon afterwards fell asleep, and on awaking partook of a hearty dinner.

On the morning of the 24th, we found that tenderness at the seat of the wound during the night had prevented him from enjoying a full amount of rest; nevertheless, he appeared better. His pulse was 104; his appetite good, and his tongue much cleaner. Some opiate pills were ordered to procure sleep. The tube was reintroduced, but on withdrawing the plug a little fetid air only escaped. It has since remained in the chest, and for about a fortnight a pint of pus was daily discharged; at first partly through the tube and partly by its side, latterly through the tube alone. From that time to the present the discharge has lessened to about one half. For a few days after the air was admitted freely into the chest, the discharge was extremely offensive, but since the air has been again in a great measure excluded, it has lost much of its disagreeable odour.

On the 25th, the third day after the operation, the tongue was perfectly clean. As illustrative of the effect of the operation on his digestive organs, I may mention, that on that day he ate for breakfast two eggs and three slices of bread. At noon he had another slice of bread and a glass of wine. At four, nearly a pound of mutton, with a proportionate amount of bread and potatoes, and a pint of water; and in the evening more bread with his tea. His appetite has continued equally good up to the present time.

After a fortnight the porter began to act on his bowels, and the diarrhoea, which lasted three or four days before I was informed of it, greatly retarded his progress. His pulse is now a little below 100; his breathing 25; and his strength, which was very much impaired at the time of the last operation, has somewhat increased, notwithstanding the exhausting effect of the discharge and the diarrhoea combined. He usually sits up for three or four hours every day. Nevertheless it must not be concealed that he is very much emaciated, and that any unlooked-for addition to the debilitating agents already at work would place his life in immediate jeopardy. I have good expectation, however, that his strength will increase more rapidly in pro-

portion as the discharge becomes diminished, and that the constitutional improvement will prove more permanent than before, in consequence of the different organs being exempt from that injurious pressure, which I am satisfied was the cause of relapse on the two last occasions.

If it proceed, we may hope that while the walls of the right side of the chest collapse over the diminished volume of their contents, that the lung will at the same time at least partially unfold itself, the air gradually penetrate its substance, and absorption go forward in any bands of lymph which may oppose its expansion. It is probably too much to expect that this will take place to any great extent, or that the lung will ever with much efficacy perform its important functions. Nevertheless, what Nature is unable to effect on the one side, she will compensate for on the other, and an irreparable injury done to the right lung may be counterbalanced by a fuller development of the left. Thus, after a while, the system at large may not be much a loser.

This, however, will require time, and ere it be accomplished the patient's strength may be found inadequate to the long-continued demand upon it, or some new disease may arise, or some incipient one be matured, to interrupt the work, and thwart this desirable end. I am far, however, from regarding the success of the operation as at all dependent on the patient's future progress. We have some reason to expect an ultimately favourable termination (and such a termination, doubtless, would greatly enhance the value of the means mainly instrumental in bringing it about): but should it be otherwise, the great advantage already derived will amply repay us for our trouble, be more than an equivalent to the patient for the trifling suffering by which the benefit was secured, and fully establish the propriety of the operation.

The case appears to me to be chiefly interesting—

1st. On account of the large amount of effusion. The quantity discharged at one time was a gallon, and the whole hitherto cannot be much under five.

2d. On account of its complication with pneumo-thorax, of doubtful connection with phthisis.

3d. On account of the exceeding mildness of all the symptoms which accompanied the early formation of the matter, constituting what has been termed the latent form of the disease.

4th. As showing the local character of the disease, and the entire dependence of severe constitutional disturbance on the pressure of the fluid, and consequently the inutility of attempting by mere medicinal

agents either to cure the one or to allay the other.

Lastly. As exemplifying the facility with which, and the extent to which the removal of the fluid may be effected without the admission of air (a matter of much importance in more recent cases where the lung is capable of expanding), and the great and immediate, and possibly permanent benefit which sometimes follows an operation when performed under circumstances apparently very unfavourable.

Dr. TURNBULL read a long list of cases of paracentesis thoracis, of which nearly two-thirds recovered, and lived for years.

Dr. MACNAUGHT mentioned the case of a man, aged 35 years, who wore a canula constantly, and daily discharged a large quantity of highly offensive matter. About every tenth day he had severe dyspnoea, which was relieved by injecting warm water. He had known the patient for at least four years; and for any thing that he knew he may be alive still, though it is many years since he saw him. He rode daily on horseback, and begot several children after being tapped.

Mr. HIGGINSON advocated the early removal of the fluid, if it could be ascertained to be purulent. In a case of serous empyema the patient had been tapped and died.

Dr. NEVINS had seen two cases of serous empyema tapped in London with temporary, and only temporary, benefit. He had tapped a patient lately two or three times, withdrawing about two pints of serum, the first time with manifest relief of the urgent symptoms, but the latter tapplings produced less benefit, and the patient died at last. In a case reported to him by Mr. Hensley, of Bath, the patient entirely recovered.

Dr. IMLACH saw a case in which a large quantity of pus was evacuated, but on a second operation only frothy blood. After some weeks the man coughed up a large quantity of blood, and recovered.

Dr. NOTTINGHAM denied the danger of admitting air, and said abscesses often heal best after being freely opened—therefore open the chest freely.

ACADEMY OF MEDICINE, PARIS.

March 19, 1850.

PRESIDENT, M. DE BRICHTEAU.

English and French Obstetrics.

MADAME MUSEUX, of Montronge, transmitted a statistical table of five hundred and forty-one labours, of which four hundred and eighty-eight were natural, fifty-

three were preternatural, and fifty-three terminated by the aid of the hand alone. The conclusions drawn from these statistics went to show the advantage of temporizing as much as possible before having recourse to active interference in parturition. This rule, it was observed, is in conformity with the doctrines of the French school, and contrary to the precepts of some British Obstetricians.

Influence of Atmospheric Pressure in the Mechanism of Respiration, and the Process of Hematosis. By M. PRAVAZ.

The essential points of the author's essay are contained in the following propositions:—

1. An increase of atmospheric pressure favours the development of the pulmonary cells.

2. The condensation of the atmospheric air facilitates the endosmosis of oxygen, and its absorption by the venous blood.

3. This increased pressure favours the flow of blood to the right cavities of the heart, and thereby aids the dispersion of visceral congestions.

MM. DESPORTES, ROCHOUX, and DUMERIL, objected to, and refuted the author's conclusions, on physical, anatomical, and pathological grounds.

Epidemics of 1848.

M. GAULTIER DE CLAUDEY read the annual report for 1848 on epidemics.

Thirteen reports had been received. These proceeded from nine departments. Ten of the reports had typhoid fever for their subject. The others referred to influenza, catarrhal pneumonia, and cerebro-spinal meningitis.

Epidemics of typhoid fever had been manifested in seven departments—i. e. in those of Doubs, Jura, Pas de Calais, L'Isère, le Nord, la Seine-Inférieure, and les Vosges. The total number of cases was four hundred and three. The mortality was in the ratio of one in five and two-thirds. A greater number of female than of male patients had occurred: a difference which was attributed to the greater exposure of females to the disease, in nursing, &c.

The epidemic of catarrhal pneumonia, presenting typhoid features, occurred in the department of les Vosges, in the months of July and August. Influenza appeared in the same department in the months of January and February.

Cerebro-spinal meningitis had prevailed in the garrison of St. Etienne (Loire) from February to October. During this epidemic it was observed that of two regiments equally well lodged and cared for, in the one, consisting of a thousand men recently

returned from Africa, only six cases happened, of which three were fatal; the other, comprising the same number of fresh recruits, presented a hundred and seven cases, of which thirty were fatal.

ACADEMY OF SCIENCES, PARIS.

March 18, 1850.

PRESIDENT, M. POUILLET.

Staphylophary.

PROFESSOR SEDILLOT, of Strasbourg, in a note addressed to the Academy, described a new method of performing this operation, the chief feature in which is the division of the abductor muscles of the palate, the *peristaphylius externus et internus*, and *glossæ et pharyngo-staphylius*, which, by their actions, usually present an obstacle to the union of the cut surfaces of the velum palati. When those muscles are divided the surfaces are easily placed and maintained in contact, and the cure is certain if the ligatures be properly placed. The incisions in the muscles heal readily in the course of a few days. The author has contrived an instrument to facilitate the performance of the operation.

New Test for Sugar in Liquids.

M. E. MAUMENE (of Rheims) transmitted a notice of a test tissue, which serves to detect the presence of sugar in liquids. Chlorine, the author observes, contrary to the assertion of Liebig, acts on sugar at a temperature of 212° Fahr., and even in the cold after a long period. A brown substance, partly soluble in water, is produced by its dehydrating power. The chlorides, e. g. chloride of tin, bichloride of mercury, chloride of antimony, by their affinity for water, possess this property in a still greater degree.

A strip of any kind of tissue that is not acted upon by chloride of tin,—e. g. white merino—is to be saturated with a strong solution of this salt, and then dried. Thus prepared, the tissue forms a convenient test of the presence of sugar in any liquid. A few drops of a very dilute saccharine fluid placed on the merino, and exposed to a temperature of from 260° to 300° Fahr., will immediately produce a dark brown or black spot.

By the help of this test the presence of sugar in the urine can be readily detected. Ten drops of diabetic urine, the author stated, diffused in half a pint of water, would in this way yield a brownish black spot. Ordinary urine, urea, and uric acid, produce no result of this kind.

Diminution of the Fibrine of the Blood under the influence of motion.

Dr. CORNE states that he has experimentally confirmed the conclusion of M. Marchal, that motion causes a diminution of the fibrin of the blood. Dr. Corne also states that the motion of the blood drawn from a vein causes the same diminution. The increased movement of the blood in febrile disease, the author adds, has the same effect, and, in inflammatory disorders, moderates the tendency to the excess of fibrin in the blood.

SURGICAL SOCIETY OF PARIS.

March 13, 1850.

PRESIDENT, M. DEGUISE, père.

Partial Amputation of the Right Hand and Wrist.

M. HUGUIER presented a patient in whom, in consequence of a cancerous growth, it was necessary to remove three fingers with their metacarpal bones, and half the second row of carpal bones. The thumb and index finger were preserved. From trials made on the dead body, M. Huguiet had found that the palmar flap would not cover the wound made by the amputation of the fingers and part of the metacarpal bones, unless the entire metacarpal and carpal bones were also removed, although these were not implicated in the malignant disease.

Removal of a Carcinomatous Polype attached to the Nasal Fosse.

M. Huguiet related the details of an operation which he had performed for the removal of the polype. He had been compelled from its size, and the extent to which it encroached on the orbit, to remove a portion of the superior maxillary bone. Previous attempts to extract it by the nostrils or fauces had failed, and rather seemed to promote its growth. In performing the operation, the *velum palati* and the orbital plate of the ethmoid bone had been preserved. The patient experienced no ill consequences from the operation, and very slight disfigurement or trace remained.

Disarticulation of the Arm.

M. CHASSAIGNAC presented three patients in whom disarticulation of the arm had been performed. Two of these had been operated upon according to Lisfranc's method, the third according to that of Dupuytren.

M. Chassaig nac gave the preference to Lisfranc's operation, as affording a better

stump, with a more equal and regular cicatrix.

M. LARREY advocated his father's plan of performing the operation, which he stated was less frequently followed by fistulous openings.

March 20, 1850.

Penetrating Wound of the Abdomen—Strangulation of a portion of intestine in the lips of the wound.

The patient was admitted on the 11th inst. into the Hospital *Saint-Antoine*, under the care of M. Chassaig nac.

The wound, which had been received in a quarrel eight days previously, was situated below the umbilicus: it was about three fingers' breadth in extent on the surface, but much less below the surface. The surgeon who had first seen the case had closed the wound by sutures in the integuments. Serious symptoms showed themselves—fecal vomiting, and other signs of strangulation. In this state he was admitted into the hospital. The house-surgeon immediately opened the wound, and perceived a fold of intestine strangulated in the wound, which he in vain endeavoured to reduce. M. Chassaig nac succeeded in its reduction, but the patient sank on the following morning.

On examination it was found that the weapon had wounded the serous coat, but had not penetrated the muscular coat of the intestines. There was no effusion into the abdomen. There was a slight trace of peritonitis. It was clear that death had ensued from the bad surgery practised in the first instance.

Erectile Venous Tumor.

M. MAISONNEUVE exhibited a tumor the size of a fist, which he had removed from the back of a girl sixteen years of age. It had originated in a blow. M. Nonat and M. Maisonneuve had regarded this growth as a *lipoma*, but upon cutting down upon it, it was found to be a venous tumor developed from the right side of the laminae of the vertebrae. The operation was tedious and difficult, but was completely successful, and the patient had recovered.

MORBUS DEMOCRATICUS.

A STUDENT of medicine in the University of Berlin had taken the following topic for the subject of his thesis—*De Morbo Democratico novæ Insania formæ*. The democrats of the city appointed a deputation to argue with the author, who, however, being somewhat alarmed, took refuge under a pretext afforded him by Dr. Casper, Dean of the Faculty, and the disputation was adjourned *sine die*.

Hospital and Infirmary Reports.

LONDON HOSPITAL REPORTS.

Impaction of a foreign body in the orbit for a period of two months.

STEPHEN SULLIVAN, *etat.* 32, a strong, muscular coal-whipper, was admitted into the hospital September 25th, 1849, suffering from a severe contusion of the right eye. He stated that two nights previously he had been smoking and drinking with a fellow workman at a public-house, until getting intoxicated they began to quarrel, and a fight ensued, during which he received a violent blow on his eye-ball, which immediately deprived him of vision, and gave him most excruciating pain. His wife took him home and applied a cold lotion, giving him at the same time some domestic medicine; but, as he got much worse, she brought him to the hospital. When admitted there was total loss of vision on the affected side, extreme pain in the orbit and temple, with extensive ecchymosis of both palpebræ, and considerable proptosis of the globe, accompanied with infiltration of blood and serum into the subconjunctival cellular tissue, producing severe chemosis round the cornea, which was slightly opaque, and the aqueous humour turbid, the iris being dull and motionless, and the pupil dilated. Pulse 110; full and hard. Skin hot and dry. Bowels freely relieved before he left home. The poor fellow said he had not been able to get any sleep since the accident, or to close the eyelids on the affected side. There was constant discharge of a thick mucous character, and the edges of the lids were very much inflamed. Ordered six leeches to the temple, one grain of calomel every four hours, and warm fomentations to be constantly applied.

In the evening of the same day, as he complained of considerable increased pain in the globe of the eye extending to the head, he was bled to sixteen ounces.

26th.—Less constitutional excitement, but not the least improvement in the condition of his eye.

28th.—Is more free from pain than he has been since the accident, and has been able to get some sleep during a portion of the night. The tension and ecchymosis of the lids are diminished, and the protrusion of the globe less prominent. As slight mercurial fœtor is evident, to continue the calomel twice a-day only.

October 22d.—The inflammatory congestion of the conjunctiva is now very considerably diminished, and the constitutional excitement under which he was suffering upon admission has almost entirely

disappeared. The iris is still altered in colour, and the pupil fixed, the slightest perception of light only existing. Omit the calomel.

5th.—The protrusion of the globe is gradually diminishing, but in other respects he remains the same. Ordered middle diet, with milk.

10th.—Is gradually gaining strength, but no improvement as regards vision. He can now close the lids over the globe as natural. To have full diet, with a pint of porter daily.

20th.—An issue to be inserted in the right temple.

25th.—The physical condition of the eye remains the same; but an indurated spot, with surrounding inflammation, was observed at the outer third of the lower lid close to its orbital margin. A poultice was applied, and subsequently an abscess formed, from which about 5ij. of fetid pus was evacuated by puncture; and, as there still exists a chronic mucous discharge from the eye, a weak collyrium of arg. nitratis was ordered.

Nov. 25th.—Since the last report his health has very much improved, and all traces of conjunctival inflammation have subsided. There are, however, still to be observed several dilated straight vessels terminating abruptly at the margin of the cornea. The iris continues to look dull, and no vision has returned.

As the puncture made for the evacuation of the abscess has not closed, but assumed a fistulous aspect, Mr. Luke was induced to search with a probe for the cause of this irritation at the bottom of the wound, suspecting that probably a portion of dead bone might be the offending matter; but, the probe striking against some irregular and hard substance at the outer and lower portion of the orbit, the forceps were introduced, and a piece of the centre of a tobacco-pipe (one inch in length) was extracted. The depth of the fistulous track was one and three-quarter inches, and took a direction obliquely backwards: and, on depressing the lower lid there was seen an evident cicatrix at the reflection of the ocular conjunctiva to the lower palpebra, where the pipe must have originally lacerated the membrane; and, being fractured from the violence of the blow, become impacted amongst the muscles and cellular tissue of the base of the orbit, without affording any external evidence of its presence.

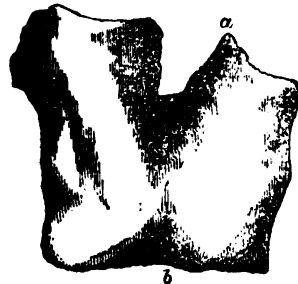
He was discharged from the hospital December 3d, after being a patient for nearly ten weeks. All inflammatory action had subsided, but the condition of his sight had not improved, the eye having a peculiarly turbid unhealthy aspect.

On a review of the symptoms attending the above case, there are several circumstances which forcibly arrest the attention; and—1st. It is curious that the lower lid should have been so much depressed by the blow as to enable so large a foreign body to penetrate the conjunctival membrane without at the same time producing some laceration of the external integument; and it is certainly a matter of surprise that it should have remained impacted in the immediate vicinity of so important and delicate an organ as the eye and its appendages for a period of two months without sooner producing symptoms by which its existence might be diagnosed. Then comes the important question, whether, had it been possible to remove it at an earlier period, there would have been a greater probability of the eye recovering its natural functions. Considering, however, the state of the organ when he was admitted, and also that the accident had originated from a severe contusion forty-eight hours previously, it must be inferred that sufficient injury had been inflicted *ad initio* to cause permanent destruction of sight, independently of the severe inflammatory action subsequently set up, and which the presence of such a foreign body must have materially augmented. Indeed, had the inflammation consequent upon the injury entirely subsided, and the body become encysted, or had it even been possible to detect it when he first came to the hospital, there is little doubt but that the ultimate result would have been similar; it being constantly observed in practice that the inflammation consequent upon contused wounds of the textures of the globe are more liable than any other traumatic injury to terminate in the subsequent destruction of sight, and often complete disorganisation of the globe.

Impaction of a foreign body in the Oesophagus.

George Smith, ætat. 45, was admitted into the hospital at 1 P.M. on the 3d of January, 1850, in a state of partial asphyxia, with very considerable dyspnoea also. His companion who came with him stated that, about twenty-four hours previously, while partaking of some roast goose for dinner, of which, from being in a great hurry, he ate very rapidly, he suddenly complained of something sticking in his throat, and made immediate attempts to dislodge it with his fingers: but not succeeding, he sent to a surgeon who resided near his house, and who, upon hearing the nature of the case, instantly advised the introduction of a probe, with a view, as he stated, of pushing the foreign body, whatever it might be, into the stomach.

Three successive attempts were made, and at the last effort considerable propulsive force was used; but, although the instrument was presumed to pass quite down to the cardiac orifice of the stomach, no relief followed its employment. An emetic of sulphate of zinc was then recommended; and, after its operation, partial relief to the distressing symptoms was experienced, but still the substance remained firmly impacted in the throat. The patient was then directed to go home, and drink plentifully of fluids, which he did, expecting that in a short time the foreign body would pass downwards; but soon after the difficulty of swallowing began to increase, and his breathing to be considerably affected; until, being much alarmed at his condition, his friends brought him to the hospital. He was then in great distress, with short thoracic respirations, small pulse, and displaying great lividity of countenance, the veins of the neck being considerably congested and prominent. Mr. Adams happened to be in the hospital at the time; and, on hearing the nature of the previous symptoms, had the patient seated on a low chair, with his head thrown back as much as possible, and then cautiously passed a whalebone rod (to the end of which a small brass hook was connected) along the back of the pharynx into the oesophagus. The foreign body was immediately detected about two inches below the level of the cervical cartilage, and was slightly detached; but, on the second introduction of the instrument, it was completely withdrawn to the back part of the fauces, so that it could be removed from the mouth by the fingers. It was found to be an irregular-shaped portion of the scapula of a goose, measuring nearly one and three-quarter inches in each direction, and lying vertically in the long axis of the oesophagus. Instant relief was of course afforded, and the patient ordered to keep himself quiet at home for a day or two. The following is the exact shape of the bone:—



a, the upper extremity of the bone, lying

against the posterior surface of the cricoid cartilage.

- 2, the lower extremity, around the edge of which the hook became entangled when it was extracted.

The particulars of the last case furnished an opportunity for the delivery of the following clinical observations by Mr. Adams on the surgical treatment of similar cases.

The importance of these cases, gentlemen, is not entirely disproportionate to the alarm and anxiety felt by the patient or his friends, and in no class of cases are the beneficial results of prompt surgical treatment more immediately displayed. In the first place, he should never omit, under the most urgent circumstances, to make a few brief enquiries as to the nature of the substance supposed to be impacted; and, should it be a portion of meat, or any other non-irritating and digestible substance, the best practice would be to push it on forcibly into the stomach by means of a probang (or any instrument of the like nature he may have at hand).

I believe that all sharp or pointed bodies are most safely treated by retraction; and no more convenient or appropriate instrument can be contrived for the purpose than that which I employed in the case now before you. It is, as you perceive, a solid rod of whalebone, about twenty-two inches long, and three-quarters of an inch in circumference in the centre, gradually tapering, however, to a point at each extremity; at one end is fixed a round piece of sponge, and at the other end a piece of watch-spring three inches in length, which is covered with silk, and connected securely to a flat blunt button-like hook, having a hole in the centre, for the attachment of some loops of silk, which are often found of great additional assistance in entangling projecting points of any foreign body; but it may so happen that, on account of some peculiar position which it may occupy in the œsophagus, the flat hook may pass by it repeatedly; still, it is impossible that any additional mischief can be effected by the employment of the instrument, which has often, I fear, been the case when the ball probang is invariably used; and, should repeated attempts with this instrument prove ineffectual, the surgeon must not be discouraged. An emetic of speedy operation has been by some employed with success, from the effects of which he may hope either that the foreign body will be completely expelled, or at any rate that it will have become sufficiently displaced for the hook to entangle it on a second attempt being made, and this, I believe, will generally obtain.

Let us briefly consider what are the dan-

gers likely to arise from the forcible propulsion of foreign bodies onwards, if hard and irritating substances. The mucous membrane and muscular fibres of the pharynx or œsophagus may be extensively lacerated, and this accident would be far more liable to occur should any narrow substance be the offending matter; because, as the œsophagus would not be equally distended at the seat of obstruction, the mucous membrane would collapse above it, and would thus very easily become lacerated by the point of the probang. These lacerations may heal and no further mischief arise, or acute inflammatory action may supervene, terminating in diffused or circumscribed suppuration in the cellular tissue around, than which you cannot possibly imagine any cases more distressing to the patient or perplexing to the surgeon. I well remember two cases which have occurred to me at this hospital during the past three years, a description of which may serve to impress the symptoms and treatment more forcibly on your attention. In both cases the impacted body was one of the small hard bones of the plaice, and in both the distress was extreme. The first case was brought to me as an out-patient, and occurred in a woman who, it was stated, had swallowed one of these bones three days before. She experienced when I saw her the greatest difficulty in swallowing, and was tormented during the attempt with suffocative fits of spasm of the laryngeal muscles; the back part of the pharynx and fauces were very much swollen and congested, but there was no external evidence of any suppuration beyond an indistinct fulness on the left side of the neck, accompanied with tenderness on pressure. Leeches and fomentations were subsequently applied, and mercury also was given at the same time that nourishing broths were administered; but, after remaining some days in the hospital, suffering the greatest agony, she died from pure exhaustion. A post-mortem examination revealed the true cause of her distressing symptoms. A circumscribed post-pharyngeal abscess existed, which had pressed forwards to the back of the larynx and trachea.

The second case to which I alluded occurred about two months subsequently, also in a woman of previously delicate health. She had swallowed the bone only two days before, since which period gradually increasing difficulty of deglutition had supervened; but her symptoms on admission into the hospital were not so urgent as in the former case. No bone could be felt in the course of the tube with the hook. Leeches were applied to the outside of the neck, but no relief was obtained; on the

contrary, the symptoms rapidly increased in severity. With the unfortunate result of the last case in my mind, I was induced most carefully to examine the back part of the pharynx, and discovered a considerable fulness in that region. I did not hesitate to plunge into it a sheathed tonsil lancet, and a quantity of most fetid pus was evacuated. I need not say, gentlemen, that the relief was almost instantaneous. Gargles of chloride of lime were subsequently used; and, by the aid of nourishing diet and tonic medicines, she went on very well for a short time. In a few days, however, more unfavourable symptoms became developed, which were found to arise from the orifice of the abscess being closed, and a fresh accumulation of matter having collected behind. This was soon remedied by the introduction of a probe, which gave vent to almost as great a quantity of pus as was first evacuated by puncture. Nothing subsequently occurred to retard the favourable progress of the case, the orifice being daily kept patent by the introduction of caustic. I may remark, as one characteristic of supuration occurring in this locality, that the pus confined in the abscesses had a most noisome sickly odour, more like that resulting from suppurations connected with necrosed bone than anything else I have ever experienced. I have successfully removed a common pin from near the cardiac orifice of the stomach by means of this blunt hook. A surgeon to whom I was showing the instrument, and describing its employment in the above cases, immediately procured one for his own private use, and, strange to say, he had only possessed it a week when he was called on suddenly to test its applicability in the case of a boy who had attempted to swallow a counterfeit half-crown to avoid detection by the police, but which had become impacted in the œsophagus, and produced imminent danger of suffocation. The hook fulfilled its duty, and the ends of justice were thus aided.

Let me, therefore, in conclusion, strongly advise you against the indiscriminate use of the probang in cases of impacted foreign bodies in the œsophagus. An instance is now fresh in my memory where one of the most distinguished legislators of the day lost his life in consequence of the impaction of a bone in the gullet, and in which case a surgeon had made forcible use of the probang unsuccessfully. When soft substances, as a piece of meat, are lodged in this canal, then the probang is clearly indicated.

Dislocation of the inferior angle of the Scapula over the Latissimus Dorsi.

THOMAS BRENNAN, *etat.* 55, by occupation a wine-cooper, was admitted into the hos-

pital March 8th. He stated that six weeks ago he experienced a sense of numbness and pain in the right arm, from the shoulder to the fingers, and attended with partial loss of motion; but this he attributes to the circumstance of his having laid on his arm during the night. He applied liniment, saponis, and the use of the arm almost recovered. Ten days after, he felt the numbness again. Whilst engaged in heavy work, he let a hammer fall out of his hand; and, in suddenly stooping to avoid a blow, he felt something give way at the shoulder; but this did not prevent him from finishing his work that day. The next morning, however, he found that he could not use the arm at all, and felt slight pain on the internal surface of the scapula. He applied some domestic remedies for a fortnight, when, finding that he became worse, he determined on coming to the hospital, and was treated as an out-patient, the arm being strapped up with soap plaster; but, still making no progress towards recovering any further use of his arm, he was admitted as an in-patient under Mr. Adams, who immediately recognised the case as one of displacement of the inferior angle of the scapula over the edge of the latissimus dorsi. The condition of the patient was as follows:—The arm was fixed and rigid; the inferior angle of the scapula formed a remarkable projection, and was almost immovable. The lower edge of the trapezius was remarkably tense, and the bundles of fibres of the muscle were most evident. The anterior part of the latissimus dorsi could be indistinctly traced beneath the scapula, and was tense at the posterior part of the axilla, but the outline of its tendon was not defined. On attempting to raise the arm, the scapula moved also, but not freely, and the whole movements of the shoulder-joint were cramped and rigid. The reduction was accomplished without much difficulty. The arm being first depressed to the side, so as to relax the latissimus dorsi, the lower part of the scapula was pushed forcibly against the ribs, at the same time that the arm was carried as high as possible above the head, and then drawn down with a slight rotary movement inwards. The angle of the scapula at once passed beneath the edge of the muscle, and the deformity disappeared. The man found immediately that he could move his arm with almost its wonted freedom. A firm bandage was placed around the chest, so as to confine the arm and forearm from motion.

Mr. Adams made some remarks on the subject of displacement of tendons, observing that such accidents forcibly show the necessity and practical value of anatomical knowledge, and instanced the long tendon

of the biceps and peroneus longus as occasionally the subject of this accident. He also related an interesting case of displacement of the ulnar nerve from behind the inner condyle of the humerus, which was brought to the hospital a few years since. It was at once recognised and easily reduced, but it was constantly afterwards slipping out of its natural position.

We are indebted to Mr. Burton, the patient's dresser, for the previous history of the last case.

Correspondence.

CASE OF GONORRHOEAL BRONCHITIS.

SIR,—The annexed case of "gonorrhoeal bronchitis" being one of interest and importance, may I beg the favour of its insertion in the columns of your journal?

Your obedient servant,

THOMAS GRAHAM, M.R.C.S.,

Surgeon to the Holloway and North Islington Dispensary.

Charles Bunbury, æt. 36, brickmaker, applied for relief at the dispensary, Dec. 29th, 1849, suffering from the following symptoms:—Constriction of the chest; severe cough, aggravated always towards morning; loud wheezing; orthopnoea; copious expectoration of mucus, which having been formerly thick, is now thin and frothy, and to the extent of one pint daily; sleeplessness, owing to the cessation of the voluntary acts of respiration, producing a sense of suffocation; great prostration; anorexia; *no febrile symptoms; pulse only 70.*

The physical signs revealed the great extent of inflammatory action in which the pulmonary mucous membrane was involved. Loud sonorous rhonchus and sibilus were extensively heard over the upper and middle lobes of the lungs. Large moist crepitation was also heard over the lower and posterior aspect of the thorax.

The above symptoms have been treated by the application of leeches to the chest, followed by blisters, terebinthinate embrocations, and small doses of tartar emetic, with squills and Dover's powder at intervals of four and six hours; together with aperients on alternate days, the bowels having been constipated.

The history of this case dates two years back from this period, when the patient was seized with an attack of gonorrhoea, for which he took medicine and used injections; but of which, according to his expression, "he had never been properly cured." While thus affected, he was, for a

misdeemeanor, committed to the treadmill, where, in ascending the bars of the wheel, he felt as if something had given way in the umbilical region; and this sensation was followed by an expectoration of copious mucus. Has since spat as much as a table spoonful of blood. From that period the gonorrhoeal discharge disappeared, and the pulmonary affection has prevailed.

At the present moment, March 20th, the chest symptoms have greatly improved, and there is a slight thin discharge from the urethra (gleet): though not completely recovered, he is now mending rapidly.

Remarks.—From the absence of any known cause, such as exposure to cold, and from the manner in which the cessation of the gonorrhoeal discharge was followed by an invasion of the pulmonary mucous membrane, I have been induced to adopt for the disease in question the term gonorrhoeal bronchitis. I was not aware that any other examples of this perilous affection had been described, till I read in Vol. IV. (N.S.) of the MEDICAL GAZETTE, (p. 472), an account of this complaint, by Mr. Dendy, President of the Medical Society of London. The symptoms described by this gentleman were so analogous to what happened in my patient's case, that they fully justify me in associating it with the same class of affections. He states that "the breathing was difficult; the expectoration mucopurulent, often very profuse; there is a sense of constriction across the chest, and the mucous r le is audible at some distance from the patient. There is, however, *no fever; the pulse naturally about 65, varying little in its character.*" Again, "the patient himself associates the disorder with a gonorrhoea contracted three years ago."

The remarkable regularity of the pulse, and absence of febrile symptoms, notwithstanding the severity of the pulmonary complaint, led Mr. Dendy, and also myself, in the above case, to refer the disorder to the cause already mentioned, and to give a favourable prognosis. The treatment was in both cases conducted on similar principles; that of Mr. D. consisted in "unloading freely the alimentary canal, and employing counter-irritation on the surface: a seton was introduced into the thorax. In a later report (p. 602), he states that a "return of discharge from the urethra had taken place, followed by an alleviation of all the symptoms."

Having thus endeavoured to show the existence of such an affection as gonorrhoeal bronchitis, and that, too, on excellent authority, I would beg to leave to my professional brethren the task of searching diligently for cases illustrative of this disease, and of demonstrating the manner in which it takes place, whether by metastasis

from the urethral to the pulmonary mucous membrane, owing to the sudden cessation of discharge in the former, or by a simple transfer or rather *spread* of inflammatory action, by which the disorder is transmitted from the one to the other.

Upper Holloway, March 23d, 1850.

CORRESPONDENCE ON THE BOA VISTA
FEVER.

SIR,—May I request that you will give insertion to the enclosed letters, which I have considered it necessary to address to Dr. Davy, Inspector-General of Hospitals, on the subject of a note relating to the contagion of yellow fever, which appears in the monograph of Dr. Blair, on "The Demerara Yellow Fever Epidemy," recently edited by Dr. Davy.

I have the honour to be,

Your obedient servant,

J. O. M'WILLIAM.

14, Trinity Square, Tower Hill,
March 20th, 1850.

14, Trinity Square, Tower Hill,
March 11th, 1850.

DEAR SIR,—I have just glanced over a book recently edited by you, entitled "Some Account of the last Yellow Fever Epidemic of British Guiana, by Daniel Blair, M.D." In the Appendix, page 137, the following passage occurs in a note, of which you are the author:—

"Coincidence by itself is surely of no account; it is constancy which gives it importance in the relation of cause and effect. In obscure cases it should be only suggestive. The late fever in Boa Vista, the first appearance of which was coincident with the arrival of the "Eclair," with fever on board, from the coast of Africa, by many has been considered as a demonstrative example of the importation of the disease; yet Dr. King, who was employed officially to investigate the matter, arrived at the conclusion that it was of local origin. The fact most in favour, apparently, of the Boa Vista fever being imported, is the general healthiness of the island for many years previously. But this may be delusive."

Now, from the confident manner in which this statement is made, and employed by you as an example illustrative of a case in which fever was fallaciously supposed to have been introduced into an island by an infected ship, it may be believed by those who have not read the documents connected with the Boa Vista epidemic, that Dr. King was the only person engaged in investigating its nature and history; and that the "conclusions" arrived at by him have been very generally,

if not almost universally, admitted by the profession to be correct. This, however, so far from being the case, is the very reverse of the case, as I am willing and ready to prove.

So far as I have seen, every journal (and they have not been few) in Europe and America that has discussed the subject of the Boa Vista epidemic, has rejected Dr. King's "conclusions." They have held them untenable even upon his own facts.

Until the appearance of the account of the British Guiana Epidemy, no one, not even Sir William Burnett (who selected Dr. King for the Boa Vista inquiry, and who was not likely to pass by any thing favourable to his own views), had publicly given any countenance to Dr. King's conclusions; and be it remembered that his conclusions were altogether on the side of the anti-contagionists. Yet, neither individuals nor journals have hitherto taken any advantage of this favourable evidence. As the opponents of contagion have not adopted conclusions which ought otherwise to have suited their purpose admirably, there seems to be good grounds for supposing that they have considered them unwarrantable by the facts upon which Dr. King endeavoured to establish them.

As regards my "Report on the Boa Vista Fever," on which you have been silent, how has professional opinion expressed itself? I can confidently assert that every journal in this country, in France, and in America, in which the Boa Vista papers have been reviewed, has been favourable to my views of the case. It matters not whether those journals have generally advocated or opposed the doctrine of the contagion of yellow fever. For once they have been unanimous.* The ablest medical journal in America, and which has generally been opposed to the contagion of yellow fever, says, "We have been inclined to scrutinise very closely the facts and deductions presented in the two documents of Dr. M'William, in proof of the contagious character of Boa Vista fever, and to give full weight to the statements and arguments adduced by Dr. King to prove its strictly endemic origin. After the most careful examination of the subject, as presented by these several documents, we are constrained to confess very candidly,

* The review in the *Lancet* is no exception. The reviewer expresses a qualified doubt as to the introduction of the disease into Boa Vista by the *Eclair*; but he admits the propagation of the disease throughout the island by contagion. He, moreover, grants that the fever on board the *Eclair* and that on the island were identical. If the disease was contagious on shore, *a fortiori*, it was also contagious on board, and therefore quite capable of being communicated from the ship to the island.

*and, we admit, somewhat reluctantly, that Dr. King has failed in his attempt to invalidate the conclusions of Dr. McWilliam, logically deduced from a connected series of well-defined facts.**

This is the language of one opposed to the contagion of yellow fever: and I need hardly tell you that the opinion of those who support the contagiousness of that disease is still more forcibly expressed to the same purport.

It is then, I think, manifest that your zeal in the anti-contagion cause has led you into a course more becoming a partisan than an impartial narrator of events. To support your views, you have adopted those conclusions regarding the Boa Vista epidemic that have been every where publicly rejected, and you have passed unnoticed those that have been every where publicly accepted. In my humble opinion, there is, therefore, no great want of charity in supposing that many, if not all the notes in which you assail contagion, partake in some degree of this one-sidedness,—an influence that ever has been, and ever will be, prejudicial to the elimination of those facts in the history of epidemics by which the adjustment of points now disputed may be one day arrived at.

You appear to attach little importance to the "coincidence" of the outbreak of fever on the island of Boa Vista, and the arrival there of the "Eclair" with fever on board. Let me remind you, or it may be inform you, that the Boa Vista epidemic furnishes *other* coincidences, which are thus arranged in the 3d No. of the British and Foreign Medico-Chirurgical Review."†

"The coincidence that of all the people on the island the first two deaths should have occurred in the men who were brought most into contact with the 'Eclair's' sick."

"The coincidence that the next cases should be those of a soldier, the comrade of the two men who were first affected, and of a labourer on board the Eclair."

"The coincidence that the first undoubted case in Puerto Sal Rey should have occurred in the person of the nurse of that sick soldier."

"The coincidence that the next person ill in Puerto Sal Rey should be the fellow lodger of this last-named case."

"The coincidence that all the next cases in Puerto Sal Rey should be in people having intercourse with these two cases."

"The coincidence that the first person ill in Rabil should be the familiar friend of the labourer above named."

"The coincidence that the next, or the

simultaneous cases, should be the labourer's own children."

"The coincidence that this labourer's neighbours and friends should all have suffered before the other inhabitants of Rabil."

But the proof of the importation of yellow fever into Boa Vista by H.M.S. Eclair, and its propagation throughout that island by contagion, is not obtained solely from these coincidences: for it rests upon the strongest evidence, negative as well as positive. In the Boa Vista epidemic every condition by which a disease is considered to possess contagious qualities seems to have been fulfilled. In the words of the British and Foreign Medico-Chirurgical—"If we had wished to have tried a great experiment on this subject, with all available precautions, and with all the aids against fallacy that human reasoning can furnish, it would have been difficult to have devised any more complete and conclusive than that which accident, or we should say, if it be not profane to judge of the arrangements of the universe, a providential accident has furnished us in the case of Boa Vista.

I will only add, in conclusion, that notwithstanding the strength of my present convictions, notwithstanding all that has been said and written in favour of my Report, it will be to me a source of great satisfaction, and doubtless of much instruction, to know the reasons that have led you to adopt the opposite conclusion; and that I am perfectly willing to surrender my present position the moment I feel called upon to do so by the force of fair argument.—I have the honour, &c.

J. O. McWILLIAM.

Dr. Davy, F.R.S. Inspector-General
of Hospitals, &c. &c.

14, Trinity Square, Tower Hill,
March 15th, 1850.

MY DEAR SIR,—I regret that your note of the 12th inst., which I had the honour to receive on the 13th, does not enter more fully and specially into the subject of mine of the 11th inst.

I can assure you it is much against my inclination to continue a controversy with you; but however distasteful the task may be to me, I feel that I cannot withdraw from it with justice to the subject and to myself, until some distinct understanding has been arrived at regarding your remarks on the Boa Vista epidemic, to which I would on the present (as I did on the former) occasion exclusively confine myself.

You refer me to all your notes for a reply to the last paragraph of my letter.

* American Journal of the Medical Sciences, No. xxxiii. p. 141.

† No. iii. p. 170.

I may not have expressed myself sufficiently clearly, but I meant to convey to you that it would be a source of satisfaction and instruction to me to be informed of your reasons for adopting conclusions regarding the origin of the Boa Vista epidemic contrary to those arrived at by me, and supported by the voice of the medical press in Europe and America. In looking at the notes I can find no answer: as regards Boa Vista there is nothing beyond the one-sided statement of which I complain, and some allusions to the unhealthiness of the Cape de Verdes generally, as recorded by some of the older navigators.

You state that the notes in which the question of the contagion of yellow fever is discussed were not consciously written under the influence of any undue bias. While I freely admit that this was the case, and that your object was the truth, I cannot but consider that the mode in which you have stated the Boa Vista case is an instance of the facility with which a man may unconsciously mar his best intentions.

Your object in the notes throughout was to give a clear and unreserved record of the facts you dealt with. Let us see how you proceeded to carry your intentions into effect, and how far the method you adopted is consistent with that generally pursued when a case is being fairly, candidly, and impartially stated.

You were aware that there were two reports, each opposed to the other, on the Boa Vista epidemic, and you alluded to one only in your "note," that one being favourable to the non-contagious nature of yellow fever. Now, I cannot help observing that it would have been more consistent with your freedom from bias had you mentioned the conclusions arrived at by both reporters.

You were aware (for you told me so at the Royal Society) that the report which you omitted to notice had been generally (I say universally) favourably received; and that the "conclusions" upon which you grounded your note had been generally (I say invariably) unfavourably received.

Notwithstanding that you were aware that the statement in your note was opposed to the general opinion of the profession, as recorded in the public journals, you have not deigned to support it by adequate reasons.

Now to my view it appears that the solution of the vexed question of the contagion of yellow fever is not thus to be effected. Your own views even must derive but little analogous support from conclusions which have no rest upon a sound basis. In my humble opinion, the subject in which we are interested would

have been better served had you given us a plain statement of facts regarding the Demerara and Barbadoes epidemics, and for a time dismissed from your mind all "hypotheses, theories, and analogies." had you, in short, pronounced a verdict "upon each epidemic solely upon the evidence which the particular case afforded."

When you say that "solitary instances are of little importance in determining whether a disease is contagious or not," am I to infer that you would consider the Boa Vista case, even if allowed to be one of undoubted contagious introduction, as of no consequence, because it "would be only a solitary instance?"

If this be your meaning I must again differ from you. If the Boa Vista case be, as I firmly believe, one whose history affords every kind and condition of evidence necessary to establish a positive instance of the introduction and propagation of yellow fever by contagion, then it must be considered of the highest importance, and not to be controverted by any number of mere negative results.

I beg you will allow me to remain,

Yours very faithfully,

J. O. McWILLIAM.

14, Trinity Square, Tower Hill,
March 18th, 1850.

MY DEAR SIR,—I can assure you that had your "note" in Dr. Blair's book suggested nothing more than what you expressed in your note to me of the 16th instant, received to-day, I should not have troubled you with any correspondence on the subject. But the "note" of which I complain is, in my humble opinion, calculated to convey to those (and only to those) who have not read the documents and reviews connected with the Boa Vista epidemic most erroneous views regarding its history, inasmuch as they may be led to suppose that the "conclusions" which you have with so much confidence called to your aid in support of your opinions, have been generally adopted by the profession, whereas the very reverse has been the case.

It is for the purpose of in some degree counteracting a result of the nature I have contemplated, that I shall send my letters to you to one of the professional journals for publication; and I trust you will not object to your notes appearing along with them.—I beg you will allow me to remain,

Yours very truly,

J. O. McWILLIAM.

Dr. John Davy, F.R.S. Inspector-General of Hospitals.

Replies to the above letters were received from Dr. Davy in the form of brief notes, written in courteous terms; but they are

not published, in consequence of what is stated by Dr. Davy in his last note, from which the following passage is extracted:—"I could not have anticipated the intention intimated in your note of the 18th, this instant received, viz. of publishing the letters which you have addressed to me, accompanied by my brief notes, as brief as courtesy permitted, and which were written merely from a feeling of courtesy in reply to them. I need hardly inform you that as I had no design, so I have no wish to have them published."

"To Dr. M^cWilliam, F.R.S."

Medical Intelligence.

RESOLUTIONS ON MEDICAL REFORM.—THE LANCASHIRE AND CHESHIRE MEDICAL ASSOCIATION.

A SPECIAL general meeting of the members of the Lancashire and Cheshire branch of the Provincial Medical and Surgical Association was held at the Leigh Arms Hotel, Newton, on Thursday, the 28th March instant, to take into consideration the question of medical reform.

The chair was occupied by Sir Arnold Knight, M.D., and subsequently by Dr. H. H. Broughton, of Preston, in consequence of Sir Arnold Knight having to leave before the termination of the meeting.

The following resolutions were passed:—

1st. Moved by Mr. Dorrington, of Manchester; seconded by Mr. Southam, of Manchester:—

"That this branch wishes to express its concurrence with the general views advocated by the parent Association on the subject of medical reform,—viz., that, in any bill which may be proposed in Parliament, there shall be—1st. Uniform and sufficient qualification in every branch of medical science. 2. Equal right for all so qualified to practise throughout the whole extent of Her Majesty's dominions. 3. The adoption of the representative principle in the formation of the Council or governing body."

2d. Moved by Dr. Lyon, of Manchester; seconded by Dr. Broughton, of Preston:—

"That this meeting is of opinion that the proposed new charter of the College of Physicians is one which, with a few modifications, would meet with the approval of the general body of practising physicians, and of the profession at large."

3d. Moved by Mr. Noble, of Manchester; seconded by Mr. Burrows, of Liverpool:—

"That the modification of the charter of the College of Surgeons recently proposed by the Council is altogether insuffi-

cient to meet the views of the members of that body, and the requirements of the profession generally."

4th. Moved by Mr. M^cKeand, of Manchester; seconded by Mr. J. L. Price, of Standish:—

"That this Branch is strongly of opinion that the Secretary of State should advise the Crown to enforce upon the Council of the College of Surgeons the necessity of examining and licensing the surgeons of this country to practise in every department of the profession, and of so altering the future conditions of examination for the fellowship that no person shall be eligible who has not previously been admitted a member."

Upon this resolution the following amendment was proposed by Dr. Lyon, of Manchester; seconded by Mr. Flint, of Stockport:—

"That the College of Surgeons may be so modified by extensive changes in its constitution, and the course of its examinations, as to become the proper Board for licensing surgeons for general practice."

The amendment and original motion having been put to the meeting, the Chairman declared the original resolution to be carried.

5th. Moved by Mr. Burrows, of Liverpool; seconded by Mr. Kirkman, of Manchester:—

"That this meeting is of opinion that it would be a great injustice to demand a fee of ten guineas from those gentlemen whom the Council of the College of Surgeons propose to raise to the fellowship in virtue of their twenty years' standing as members, inasmuch as no such fee was demanded from those upon whom the distinction was originally conferred."

6th. Moved by Mr. Southam, of Manchester; seconded by Mr. Hatton, of Manchester:—

"That this meeting is convinced that no modification of the charter of the College of Surgeons will be accepted by the members which does not recognise the eligibility of surgeons in general practice to seats in the governing body."

H. H. BROUGHTON, M.D., Chairman,
JOHN HATTON, Hon. Sec.

UNIVERSITY OF LONDON.

THE Chancellor of the University of London has lately received a Royal warrant, appointing the following noblemen and gentlemen Fellows of that University:—Right Hon. Lord Monteaigle, Right Hon. Lord Overstone, Right Hon. Sir James Graham, Bart., M.P., Right Hon. T. B. Macaulay, G. Cornwall Lewis, Esq., M.P., Henry Hallam, Esq., George Grote, Esq.

DEATHS CERTIFIED BY MEDICAL PRACTITIONERS.

We are this week able to extract from the Registrar General's Report a return of the proportion of deaths in the metropolis certified by medical practitioners. It is satisfactory to find that these are so numerous, as it tends in some degree to assure the public that every care is taken to prevent the concealment of deaths by unfair means, and, at the same time, to remove all apprehension of the possibility of premature interment. The following is an analysis of the week's returns:—

Deaths certified by written statements of qualified practitioners	946
Not certified by medical attendants, or not reported as certified	23
Not certified because the deceased had no medical attendance	18
Returned by coroners	185

Total deaths in the week . . . 1167

It thus appears that deaths registered in London with the signatures of coroners, and fatal diseases registered under the authority of medical certificates, are to the whole number in the proportion of nearly 97 per cent. The inquests were at the rate of 9620 per annum.

THE MEMORIAL OF THE EXAMINED FELLOWS OF THE COLLEGE OF SURGEONS.

To the President, Vice-President, and Council of the Royal College of Surgeons of England.

The memorial of the undersigned fellows by examination

Showeth,—That your memorialists have learned, with regret and disappointment, that the Council has applied to Government for a supplementary charter, for the purpose of rendering members of a certain standing eligible to the fellowship without a second examination. That your memorialists were induced to incur the expense and loss of time, and possible disgrace necessarily attendant on undergoing such an ordeal, in reliance upon the official statements of the College, that the Charter of 1843 was a final measure, that was to assign to each individual his *status*, and to establish a permanent organization of the surgical profession.

Your memorialists most respectfully submit that the proposed alteration of the Charter of 1843 will be highly injurious to the profession, and unjust to themselves: that it will destroy all confidence in the statements of the Council, and in the stability of any professional institution whatever; that it will degrade the fellowship, and render it valueless in the public esti-

mation, because a large number of members would then be admitted to that honour without any examination whatever, in spite of the notorious fact that several of those who have been examined have been rejected. Lastly, that it will be a breach of faith towards your memorialists, who have, in reliance upon the public official documents of the College, subjected themselves to this examination, if other members are admitted to the fellowship on more facile terms, because its value as a mark of surgical proficiency will be thereby destroyed.

Your memorialists, therefore, most respectfully pray that you will abide by the Charter of 1843, and abstain from carrying out the proposed alterations.

EMPLOYMENT OF COLLODION IN THE OPERATION FOR HARE-LIP.

M. LESUEUR has made use of collodion to moisten bandages for this operation, which he applies in such a manner that the edges of the incisions are drawn together by them.

X

STATISTICS OF THE MEDICAL PROFESSION IN PRUSSIA.

DURING the year 1848 there were in Prussia 3515 doctors of medicine, 2919 of whom were at the same time doctors of surgery; 2875 accoucheurs; 118 ophthalmologists. The physicians in public employment were increased in number to 969, and the military physicians to 320.

There were 957 surgeons of the first class, among whom were 696 accoucheurs, 293 experts, 336 holding state appointments, and 143 military surgeons.

Of surgeons of the second class there were 1161, 112 of whom held diplomas for town practice, and 242 for country practice; 296 were obstetric practitioners, 116 experts, 246 were civil functionaries, 70 military surgeons, and 1 ophthalmologist.

There were also 79 dentists, 1455 pharmacians, 1091 veterinaries, and 1150 midwives.

X

TREATMENT OF BURNS.

THE most soothing and convenient first dressing for recent burns was found to be cotton dipped in sweet oil. The oil prevented the adhesion of the cotton to the cuticle, the removal of which often aggravates the case. Ice in bladders can be applied over the cotton, if desired. As a general rule, nothing surpassed the linimentum calcis in the after-treatment.—*Notes of Hospital Cases, by Dr. Hartshorne, in American Journal of Med. Sciences, Jan. 1850.*

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 28th March, 1850:—
 Harry Frederick Barnett, Feckenham, Worcestershire; Arthur Michael Button, Bury St. Edmunds; John Davies Cleaton, Llanidloes, Montgomeryshire; John Henry Trouncer, Shrewsbury; Hugh Holland Massey, Camberwell; John Martin Birom, Exeter; John Deane Baker, Oakhill, Somersetshire; Joseph Henry Shorthouse, Tunbridge, Kent; William Stall Steele, Northallerton, Yorkshire; Henry Morris Simmonds, Barbadoes; Richard Neale; George Edward M'Laughlin; John Hutchings Jerrard, Honiton, Devon.

OBITUARY.

On the 6th of December last, on the coast of Africa, a few days only after being invalided from Her Majesty's Steamer Phoenix on that station, William Roberts, surgeon R.N., eldest son of Mr. Roberts, Gosport.

On the 1st inst., at Sloane Street, Chelsea, Dr. W. P. Lauder, M.D. F.R.S.E.

BOOKS & PERIODICALS RECEIVED FOR REVIEW

DURING THE LAST TWO WEEKS.

Introductory Lecture at Massachusetts College. By H. J. Bigelow, M.D.
 The Treatment of Secondary Syphilis. By Langston Parker.

On the Use and Abuse of Alcoholic Liquors in Health and Disease. By W. B. Carpenter, M.D. F.R.S. &c.

The Druggist's General Receipt Book, &c. By Henry Beasley.

Outlines of Experimental Chemistry, &c. By Thomas Tate.

Zeitschrift für die gesammte Medicin. Nos. 10 and 11, October and November, 1849.

The British American Journal. March 1850.

Monthly Journal of Medical Science. April 1850.

The British and Foreign Medico-Chirurgical Review. No. 10. April 1850.

London Journal of Medicine. April 1850.

The Journal of Psychological Medicine. April 1850.

The Veterinary Record. April 1850.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.74

Thermometer 35.9

Self-registering do. Max. 0.0 Min. 12.8

From 12 observations daily. Sun.

RAIN, in inches, .17.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 8° below the mean of the month. It is worthy of remark, that, on Tuesday, March 26th, the thermometer fell to 12° 8, i.e. 19° below the freezing point!

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, Mar. 30.

BIRTHS.		DEATHS.	
Males....	711	Males....	600
Females..	730	Females..	567
1441		1167	

CAUSES OF DEATH.

ALL CAUSES	1167
SPECIFIED CAUSES	1165
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	182
Sporadic Diseases, viz.—	
1. Dropsy, Cancer, &c.	87
2. Brain, Spinal Marrow, Nerves, and Senses	127
4. Heart and Bloodvessels	54
5. Lungs and organs of Respiration	233
6. Stomach, Liver, &c.	69
7. Diseases of the Kidneys, &c.	9
8. Childbirth, Diseases of Uterus, &c.	9
9. Rheumatism, Diseases of Bones, Joints, &c.	9
10. Skin	1
11. Old Age	37
12. Sudden Deaths	32
13. Violence, Privation, Cold, &c....	98

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	8	Convulsions.....	37
Measles.....	19	Bronchitis.....	113
Scarlatina.....	15	Pneumonia.....	88
Whooping-cough....	44	Phthisis.....	115
Diarrhoea.....	12	Lungs.....	15
Cholera.....	0	Toothing.....	13
Typhus.....	39	Stomach.....	1
Dropsy.....	24	Liver.....	4
Hydrocephalus.....	32	Childbirth.....	6
Apoplexy.....	31	Uterus.....	3
Paralysis.....	26		

REMARKS.—The total number of deaths was 1167 below the average weekly mortality of the thirteenth week of few previous years. The method of striking the average now adopted in the Registration Returns creates extraordinary weekly differences. Thus, in the week ending March 23, the deaths were 1026, or 44 above the average of that week. In the week ending March 30th, the deaths were 1167, or 141 above the number of the preceding week, and yet, as it is above stated, they are actually 113 below the average of the week. Such a sudden fluctuation as this must have been owing to accidental and not to general causes.

NOTICES TO CORRESPONDENTS.

Assistant-Surgeon Moore, Nulltupoor.—The fifth and concluding paper has been received.—A number of the Journal of March 29th, containing the first paper, has been forwarded to India. Mr. Swan's contribution has come to hand, and will have early insertion.

The communications of Dr. Snow, Mr. Smith, and Mr. Rose, as well as the King's College Hospital Report, are unavoidably postponed until next week.

RECEIVED.—Mr. T. W. Evans.

Corrigenda.—In the last number, page 582, col. 2, line 23 from top, dele "with."—Page 535, col. 1, line 2 from foot, for "sympathetic" read "sympathies."—Page 560, col. 2, line 18 from foot, for "Croeg," read "Crocq."

Notices.—In order to prevent delay in the insertion, it is particularly requested that all letters enclosing Advertisements be marked on the outside "Advertisement."

Lectures.

COURSE OF LECTURES

ON

DISEASES OF THE HEART.

Delivered at St. Vincent's Hospital during the Session 1849-50.

By O'BRYEN BELLINGHAM, M.D.

Fellow of the Royal College of Surgeons in Ireland, and one of the Medical Officers of the Hospital.

LECTURE VII.—concluded.

SOUNDS OF THE HEART (continued).

Theory of friction between the blood and the parietes of the orifices of the heart as a cause of the sounds—Objections to the theory of valvular tension as a cause of the first sound—Objections to the theory of muscular contraction as a cause of the first sound—Objections to the theory of the recoil of the blood upon the arterial valves as a cause of the second sound—Pathological evidence in favour of the theory of friction between the blood and the parietes of the orifices of the ventricles as a cause of the sounds of the heart.

Theory of friction between the blood and the parietes of the orifices of the heart.—From what precedes, it would appear that sounds in every respect analogous to the normal sounds of the heart may be developed independent of valvular action, or of muscular contraction; while we know that the normal sounds of the heart are readily converted into murmurs simply by increase of friction between the blood and the parietes of the orifices of the heart. Now, when we consider the rapidity and the force with which the blood enters and is expelled from the ventricles; and when we consider the amount of friction which must necessarily take place between this fluid and the parietes of the orifices of the heart, it seems not unreasonable to refer the normal sounds of the heart to this cause, rather than to valvular action or muscular contraction: the first sound to the friction between the blood and the parietes of the arterial orifices during the ventricular systole; the second sound to the friction between the blood and the parietes of the auriculo-ventricular orifices during the ventricular diastole.

First sound.—The first sound of the heart we know is synchronous with the ventricular systole: in this act, the blood, compressed by the contraction of the

powerful muscular walls of the ventricles, is propelled with considerable force into the aorta and pulmonary artery, the sigmoid and semilunar valves of which are suddenly elevated. In the rapid passage of the blood from a wider to a narrower area, there must be considerable friction between this fluid and the parietes of the arterial orifices; quite sufficient, in my mind, to produce the prolonged first sound of the heart. This sound necessarily has a distinct character from the second sound of the heart, because the resistance to be overcome is so much greater, and the passage of the blood through these orifices is more gradual; it is likewise more prolonged, because sound must be developed during the entire period that the blood is passing from the ventricles into the large arteries: and the slower the action of the heart, the more prolonged will this sound be.

Second sound.—The second sound of the heart we know is synchronous with the ventricular diastole: during this act the muscular fibres of the ventricles are relaxed, the cavity of the ventricles enlarges, and the walls of the ventricles re-expand; the curtains of the auriculo-ventricular valves open, and there is a sudden influx of blood from the auricles through the auriculo-ventricular orifices. It is scarcely necessary to say that it is not the contraction of the auricles which propels the blood into the ventricles at this period of the heart's action; nor is the dilatation of the cavities of the ventricles the result of the entrance of the blood from the auricles, as some have supposed. It is not, either, necessary for the production of this sound that the diastole of the ventricles should be an active process like the systole; the ventricles being hollow muscles, the state of relaxation of their muscular fibres is a state of dilatation of their cavities: hence a vacuum would be created in them if the auricles were not at this period full of blood ready to supply them; but, as the latter had been filling during the whole period of the ventricular systole, this cannot happen, and the blood passes through the auriculo-ventricular orifices in a full and rapid stream, and with sufficient force to generate sound.

That the blood enters the ventricles with considerable force, would appear from what has been observed in experiments upon animals, as well as in the human subject. Cruveilhier says that, in a case of ectopia of the heart in an infant, when the organ was grasped with the hand during the ventricular diastole, it was violently and forcibly opened,—so much so, that he was at first under the impression that the diastole was the active state of the ventricles.

The second sound of the heart is much shorter than the first sound, because the relaxation of the muscular fibres of the ventricles in the diastole is rapid, and the motion is sudden and instantaneous. It has a different character from the first sound, because the blood has no impediment to overcome in entering the ventricles from the auricles.

Objections to the theory of valvular tension as a cause of the first sound.—It is said that the heart, being a muscular organ, and its orifices being each provided with a distinct valvular apparatus, the contraction of the muscular tissue of the ventricles, or the action of its valves, ought to be capable of producing sound. Now the first sound of the heart cannot have its cause exclusively in the sudden tension or closure of the auriculo-ventricular valves, because this act takes place at the very commencement of the systole; and the first sound is a dull prolonged sound, which persists during the entire systole. That any part of this sound is produced by valvular action seems to be doubtful, because the curtains of the mitral and tricuspid valves are floated towards the orifices by the blood which distends the ventricles; and, when the ventricular systole commences, the auriculo-ventricular orifices are mechanically closed by the pressure of the blood against the curtains of these valves.

Objections to the theory of muscular contraction as a cause of the first sound.—It remains, therefore, to consider how far the first sound is due to muscular contraction. This is supposed to be proved by the first sound having been heard in experiments upon animals when the organ was removed from the body and continued to contract, because there was then neither collision of the blood nor valvular action; but when a heart contracts and dilates under such circumstances, air must enter the ventricles during their diastole, and be expelled during their systole, and the friction of the air against the parietes of the orifices of the heart is quite as capable of developing sound as the friction of a fluid.

Three theories of the manner in which sound is produced by the contraction of the muscular fibres of the ventricles of the heart have been proposed. Dr. Hope, as I have already observed, refers it to "muscular extension;" Dr. Blakiston,* to friction between the muscular fibres themselves during the act of contraction; and others, to "bruit musculaire."

According to Dr. Hope, the sound of muscular extension is "a loud, smart sound, produced by the abstract act of

sudden jerking extension of the already braced muscular walls at the moment when the auricular valves close." With respect to this theory of the production of sound, I must confess I do not exactly understand how sound can be produced in this way at all resembling the first sound of the heart.

By many physiologists the first sound of the heart has been referred to "bruit musculaire," which, according to Mr. Bowman,* is "an exceedingly faint silvery vibration." The mechanism by which bruit musculaire is produced may (he thinks) be explained "by supposing the several fasciculi to be in rapid and constant motion, one against the other, by varying amounts of contraction in different fasciculi and parts of fasciculi." Dr. Blakiston's theory of friction between the muscular fibres themselves, and Mr. Bowman's theory of the mechanism of bruit musculaire, seem, therefore, to be pretty nearly the same.

Laennec† was the first to call attention to bruit musculaire in connection with the sounds of the heart. In the part of his work where he endeavours to explain the mechanism by which bruit de soufflet is produced, he observes:—"When the naked ear or the stethoscope is applied over a muscle in a state of contraction, or, better still, upon one extremity of the bone to which the muscle is attached, we hear a sound analogous to that of the wheels of a carriage at a distance, and which, though continuous, is evidently formed by a succession of very short and quickly succeeding sounds; or if, with the head resting upon a pretty firm pillow, the masseter muscles are strongly contracted, and then contracted with less force; in the former instance the wheel seems to roll with great rapidity upon a hard surface, in the latter it seems to roll over a rough pavement."

Dr. Williams,‡ who refers the prolongation of the first sound of the heart to bruit musculaire, observes:—"Whenever there is strong abrupt muscular action in any part of the body, like that of the heart, there will be heard a sound which will resemble that of the ventricular systole in proportion as the muscles in which it is produced resemble in thickness and density the tissue of the heart; as when we apply the stethoscope to the adductor muscle of the thumb of the closed hand, and contract the muscle strongly and quickly; or, to avoid the possibility of the joints being the seat of the sound, if we apply the end of a flexible tube to the abdominal muscles, and start them into sudden vigorous action, we may thus get sounds quite as loud as those of the ventri-

* Practical Observations on Diseases of the Chest.

* Philosophical Transactions.

† Traité de l'Auscultation Méd. tome ii.

‡ On Diseases of the Chest.

cles, and very like them in character. By varying the mode of this muscular action different kinds of sound may be produced. When the contraction is slow or sustained, however strong, we have only the dull rumbling noise which Dr. Wollaston described, and which he attributed to a vibration depending on a regular intermittence in the force of the contraction. When the contraction is gentle and slow, it may cause no sound at all; as we have seen that the auricles produce no sound, neither do the ventricles when their contraction is very feeble."

Dr. Watson,* who likewise adopts the theory of bruit musculaire, observes, in reference to the first sound of the heart:—"If, during the stillness of the night, when lying in bed, you set the teeth firmly, you will hear a continuous dull rumbling, caused evidently by the action of the masseter and the temporal muscles."

Now, the dull rumbling sound which is heard under such circumstances, if it is to be taken as the type of bruit musculaire, is very unlike the first sound of the healthy heart. It is a continuous, dull, rumbling noise, and has a much greater resemblance to the venous murmur heard in the jugular veins in cases of anemia than to it. Indeed, I am convinced that this sound has not its seat in the masseter or temporal muscles, for it is heard only in the ear which rests against the pillow, not in the opposite ear. The ear must likewise be pressed pretty firmly against the pillow, by which the air is confined between the tympanum and the external ear. Indeed, a sound altogether similar will be heard if the ear is stopped with the finger, and the temporal and masseter muscles are then strongly contracted. The sound has certainly nothing of the "faint silvery vibration" which, according to Mr. Bowman, characterises bruit musculaire; and the theory which refers the prolonged portion of the first sound of the heart to it, appears to me to rest upon too hypothetical grounds to entitle it to be considered as the cause of this sound, or of any portion of it.

Objections to the theory of the recoil of the blood upon the arterial valves as a cause of the second sound.—The second sound of the heart is generally supposed to have its cause in the sudden extension or closure of the sigmoid and semilunar valves, owing to the recoil of the column of blood in the arteries above upon those valves, when the ventricular systole ceases; or to the shock of the column of blood upon these valves at the period of the ventricular diastole; or to both combined.

That these valves close their respective orifices at the period in question, there is no doubt; but, that the act of closure of these valves, or that the recoil of the column of blood upon them, occurs with sufficient force to develop the second sound of the heart, I have considerable doubt; and for several reasons.

In the first place, the sigmoid and semilunar valves close their respective orifices the very moment that the onward current from the ventricles ceases; consequently at the instant that the ventricular systole ends.

2. The closure of these valves is described by some as a sudden flapping action, which is considered to be sufficient to develop the second sound. But these valves do not flap against one another, and it cannot be against the blood which then begins to enter the ventricles by the auriculo-ventricular orifices, because the arrangement of the tricuspid and mitral valves is such, that the blood does not reach them at this period.

3. The majority of physiologists attribute the second sound of the heart to the recoil of the column of blood in the arteries above upon the closed valves. But the amount of force with which a column of blood should fall upon them, in order to develop the second sound of the heart, would necessarily soon cause these valves to be reversed; and, if they were exposed to such a rude shock at every diastole of the ventricles, few persons could attain adult age, in whom they would not permit regurgitation.

Those who adopt the foregoing theory of the mode of production of the second sound of the heart, seem to argue as if the arteries were inelastic tubes, and that the blood in the aorta and pulmonary artery had a backward as well as a forward motion. If this were so, it could hardly fail to be perceived in the large arteries which come off from the arch of the aorta: while for a column of blood to come in contact with these valves with sufficient force to develop the second sound of the heart, presupposes an empty space in the artery above them, into which the blood falls back at each ventricular diastole. But as long as the artery preserves its elasticity, nothing of the kind can occur; the blood does not recoil with any force, or from any distance, upon these valves, because the artery immediately above them is filled equally with the other parts of the tube. In fact, the instant that the onward current from the ventricles ceases, the blood by its simple weight depresses these valves, and as long as the parts are healthy there is no recoil of a column of blood upon them. But occasionally happens, the arch

* Lectures on the Practice of Medicine,

loses its elasticity, and becomes dilated, there is then certainly a recoil of the blood contained in it upon the semilunar valves; and this state almost always eventually ends in patency of the aortic valves.

Pathological evidence in favour of the theory of friction between the blood and the parietes of the orifices as a cause of the sounds.—It will now be necessary to adduce some pathological evidence that the sounds of the heart are caused by friction between the blood, and the parietes of the orifices of the ventricles, during their systole and diastole. I have already said, that a double sound, which cannot be distinguished from the normal double sound of the heart, is heard in cases of aneurism of the arch of the aorta; and that in certain instances the first of these sounds, in others the second, and in others again both these sounds, are converted into murmurs, altogether analogous to the murmurs which accompany diseased states of the orifices and valves of the heart. That the aneurismal sounds are caused by friction between the blood, and the parietes of the orifice of the sac, requires no proof, because there is no other agency to which they could be referred. This is at least evidence that a valvular apparatus and muscular walls are not essential to the production of sounds analogous to those of the heart. The conditions common to both are a cavity into and out of which the blood passes with more or less force and rapidity; and if the friction between the blood and the parietes of the mouth of the sac of an aneurism is capable of developing, not merely a double sound, similar to that of the heart, but murmurs which differ in nothing from those developed in diseased states of the heart, the same agent is evidently equal to produce analogous sounds at the orifices of the ventricles.

First sound.—If the first sound of the heart has its cause in the friction between the blood and the parietes of the arterial orifices; and if murmurs are nothing more, in the great majority of cases, than exaggerated normal sounds, then the normal first sound of the heart ought to be converted into a murmur, whenever an impediment is offered to its exit; when the blood is propelled with increased force and velocity, or when the qualities of the blood are altered, and this fluid loses its viscosity and becomes more watery than natural; because in these several cases the friction between the blood and the parietes of the orifice is increased. The sound ought to diminish in intensity, or in duration, when less blood is transmitted by the ventricle, or when it is transmitted with less force; and it ought to be more prolonged than natural when an increased quantity of

blood is transmitted by the ventricle during its systole: and this is exactly what does occur. For instance—

1. Whenever the aortic orifice or its semilunar valves become diseased so as to obstruct the outward current of blood, the normal first sound of the heart is converted into a murmur, which will have either a blowing, rough, or harsh character, according to the amount of the obstruction, and to the force and velocity of the current.

2. When the walls of the left ventricle are hypertrophied, and the blood is propelled through the aortic orifice with increased force, although there is no impediment to its exit, the normal first sound may be converted into a murmur. In the ordinary explanation of the mechanism by which the first sound is produced, a murmur from this cause ought not to occur.

3. When the viscosity of the blood is diminished, and this fluid is propelled with increased velocity through the aortic orifice, the normal first sound is converted into a murmur.

4. When the walls of the left ventricle are thinned, and its cavity is dilated, the first sound of the heart comes to resemble the second sound, because the blood is propelled with less force, less blood is transmitted through the arterial orifice, and the systole lasts a shorter time.

5. When the walls of the left ventricle are softened, or have undergone the fatty degeneration, the first sound of the heart becomes more feeble, because the blood is propelled into the aorta with much less force; and, when the aortic orifice or the semilunar valves are diseased so as to obstruct the outward current from the ventricle, no abnormal sound will be heard, because the force of the current in such cases is too feeble to convert the first sound of the heart into a murmur.

6. When the cavity of the left ventricle is dilated, and its walls are increased in thickness, a larger amount of blood will be transmitted at each ventricular systole, and the first sound of the organ will necessarily be prolonged.

7. When the cavity of the left ventricle is not filled at the period of its systole, the first sound of the heart will be diminished in proportion, and will consequently be shorter than natural. M. Piorry attributes clearness of tone to the amount of blood contained in the ventricle, rather than to thinness of the parietes: "the sound is clearest (he observes) when the heart is most empty, yet is contracting with energy, as in palpitation."

It may be objected to the foregoing theory that the abnormal sound does not always replace the normal first sound of the heart, and that the latter is still heard

in some cases of valvular disease along with it. But as valvular disease is almost limited to the left side of the heart, the abnormal sounds are limited in the same proportion to the left side; and, if the normal sound is audible along with the abnormal, it is, of course, the normal sound of the right side of the organ which is then heard, and which the murmur was not sufficiently intense to mask completely.

Second sound.—If the second sound of the heart has its cause in the friction between the blood and the auriculo-ventricular orifices, it ought to diminish in intensity whenever there is any impediment to the entrance of the blood from the auricle, or when the ventricle remains distended, owing to its inability to empty itself. This sound is very seldom converted into a murmur, because there is nothing to increase the force with which the blood enters the ventricles from the auricles, though there are several which may diminish the force or velocity of the current from the auricles into the ventricles. For instance—

1. When the mitral orifice is much contracted, the second sound of the heart will diminish in intensity; and, when the contraction is extreme, it is scarcely audible, because but little blood can enter the ventricle from the auricle during the ventricular diastole.

2. When the ventricles of the heart of animals submitted to experiments were gorged with blood, the second sound was scarcely heard, or ceased, because a sufficiently strong current of blood could not enter the ventricle to develop sound. This was noticed both in the experiments performed in the United States and in England. "The second sound (Drs. Pennock and Moore observe) by the congestion of the ventricles ceasing first on the right right side." "When the heart was gorged, towards the conclusion of the experiments, the first sound (Dr. Hope observes) only was heard."

3. Although the second sound itself is seldom converted into a murmur, a murmur which masks the second sound is by no means rare, and is heard whenever the aortic valves permit regurgitation. Why a murmur should be heard in this case, or why the second sound of the heart should be seldom converted into a murmur, is easily understood. When the mitral orifice is contracted, less blood can enter the ventricle during its diastole, and the second sound becomes more feeble than natural: it is not converted into murmur, because the force with which the blood enters the ventricle from the auricle is too slight to produce this effect. On the other hand, when the aortic valves permit regurgitation, as these valves are on a higher plane

than the auriculo-ventricular orifice, and as it is the blood contained in the aorta above these valves which regurgitates into the ventricle, the amount of friction between the blood and the abnormal orifice is sufficient to generate a murmur in this case, though not in the former. But, the force with which the blood regurgitates into the ventricle never being so great as that with which it is expelled from the ventricle, the murmur of aortic regurgitation is always soft and blowing, and never acquires the rough harsh character which a systolic murmur often presents.

In addition, we know, that when patency of the aortic valves exists, two currents of blood must enter the ventricle at every diastole; that through the aortic orifice being the strongest, for the reasons already given: a smaller amount of blood will therefore necessarily enter by the auriculo-ventricular orifice, and the force with which it enters will be diminished, because the ventricular cavity is partially filled by the backward current through the aortic orifice. Hence we have another reason why the normal second sound should become more feeble than natural, and why it should be so readily masked by the louder sound of aortic regurgitation.

Lastly, the occurrence of intermission of the heart's sounds, or irregularity of the heart's action, which are with difficulty explained on the theory of the heart's sounds ordinarily received, admit of a ready explanation on this. For instance—

If too little blood is expelled by the left ventricle at each systole to communicate a pulse to the radial artery, and if this occurs at every second, third, or fourth beat, as the case may be, there will necessarily be an intermission of the pulse; while, if the amount of blood is too small, or the force with which it is propelled too slight to occasion friction at these periods between the blood and the parietes of the orifice, the heart's sounds themselves will be intermittent.

If the left ventricle becomes overloaded or overdistended with blood, or its parietes are weak, the systole of the ventricle may be repeated several times for one diastole; and this may occur at short intervals, so that the pulse may be felt to give several rapid and small beats, and then several stronger and more regular beats, as if it were the pulse of two different persons; and the same irregularity will be perceived in the sounds of the heart when the stethoscope is laid on the præcordial region.

These phenomena, which scarcely admit of explanation according to the ordinary theory of the heart's sounds, admit of a ready explanation if we admit that the sounds are due to the friction between the

blood and the parietes of the orifices of the ventricles; that if little blood is transmitted, or it is transmitted with little force, little sound can be produced; while, when the force and velocity of the circulation are increased, the friction will be increased in proportion; and, when an impediment is offered to the passage of the blood under such circumstances, the normal sound will be converted into a murmur.

Original Communications.

ON NARCOTISM BY THE INHALATION OF VAPOURS.

BY JOHN SNOW, M.D.

[Continued from last vol. p. 277.]

PART XIII.

Action of Alcohol compared with that of Chloroform and Ether.

Experiments on frogs with alcohol—On fishes, with alcohol, chloroform, and ether—Quantity of alcohol necessary to cause drunkenness—To cause death. Anæsthetic effects of alcohol—Læbig's views of the action of alcohol—their application to ether and chloroform—Objections to these views.

I FEEL that I ought to apologise to the readers of the MEDICAL GAZETTE for the great length of time that has been allowed to elapse before the completion of these papers. The delay has not arisen from any want of anxiety on my part to bring the subject to a conclusion, but from finding, as I proceeded with it, that it was desirable to repeat many experiments and institute fresh ones, the performance of which occupied a great deal of time.

In order to enter on the investigation of the *modus operandi* of ether and chloroform with every advantage, it is desirable to ascertain whether or not alcohol, which, in its chemical constitution and general physiological properties, considerably resembles these medicines, is identical with them in its action. It was previously stated* that alcohol, pyroxilic spirit, and acetone, which are miscible with water in all

proportions, confirm the general rule then laid down, that the power of volatile narcotic substances of the class we are considering is in the inverse ratio of their solubility, as a large quantity of the above three liquids requires to be taken to produce narcotism. It afterwards occurred to me that experiments might be instituted to ascertain whether alcohol and the other two liquids obey exactly the law which we found to apply to chloroform, ether, and a number of other bodies. Experiments to determine this point could not easily be made on animals that breathe air exclusively, on account of the length of time that the vapour would continue to be absorbed; but, by employing frogs and fishes, the end could be attained. In the experiments previously related, it was found that the second degree of narcotism was caused when the serum of the blood contained about a fifty-sixth part as much of the chloroform, ether, or other substance examined, as it would hold in solution. Now, if the rule apply to alcohol, the second degree of narcotism ought to be induced when the amount of spirit is equal to one fifty-sixth of the volume of the serum.

The following are some of the experiments undertaken to determine this point.

Exp. 47.—A frog was placed in a shallow glass jar, capable of holding a pint. Seven ounces of water, mixed with a fluid drachm and a quarter of rectified spirit of wine, were put into the jar. The spirit consisted of 80 per cent. absolute alcohol, of which it consequently contained one drachm; and, as there are fifty-six drachms in seven ounces, the water contained one part of alcohol in fifty-six. It was the early part of March; and the frog, although quite sensible, was not very lively. When enclosed in the jar, it sat, with the head above the water, breathing the air at the rate of ninety respirations in the minute. As the jar was covered by a plate of glass, the air it contained would soon become charged with vapour of alcohol to the same relative extent as the water; that is to say, it would contain 1-56th part as much as if saturated at the same temperature, and the tendency of the absorption, by both the lungs and skin of the frog, would be to establish an equilibrium between the quantity of alcohol in the fluids of its body and that in the sur-

rounding water, when the blood of the frog would consist of about 1-56th part spirits. Two hours after the commencement of the experiment, the strength of the frog appeared to be diminished, and it had a difficulty in keeping its nostrils above the water. It was breathing irregularly, and much less frequently than before. At the end of four hours its head was under the surface, and it was not breathing. Being taken out for a minute or two, it moved its head and limbs feebly, but apparently in a voluntary manner, but did not attempt to breathe. It was replaced in the jar, and left for the night, with its head beneath the surface, the jar being covered as before. The next morning, twelve and a half hours from the beginning of the experiment, the frog was found with its nostrils slightly raised above the surface of the spirit and water, and breathing gently and slowly. Being taken out, it was found to flinch slightly on the skin being pinched, and was able to crawl slowly, chiefly by the use of the anterior extremities. It recovered perfectly in the course of the day. The temperature of the room during this experiment was 50 Fahr.

Exp. 48. Another frog was placed in the same jar, with seven ounces of water, containing two and a half fluid drachms of the same spirit, the strength being consequently one part of alcohol in twenty-eight parts. In about an hour and a half the frog seemed feeble, and had difficulty in keeping its nostrils above the surface. At the end of two hours, its head had sunk beneath the surface, but the respiratory movements were going on, though feebly, and it seemed to be swallowing the liquid. At the end of three hours the lower jaw had fallen, and the mouth was open, but there were slight respiratory movements of the hyoid bones. There were feeble muscular twitches (*subsultus tendinum*) observed occasionally. A support was at this time placed under the anterior extremities of the frog, to keep its head above the surface of the water. It was found to be totally insensible to pinching. Its mouth continued open, and the feeble respiratory movements went on. At the end of five hours it was breathing very gently, and very slight twitchings of the toes could be observed occasionally. Seven hours and a quarter from the commencement of the experiment it was found to have

ceased. The frog was taken out, and showed no signs of life at first; but, on closely observing it, slight quivering movements of the toes, and of different parts of the muscles just beneath the skin, could be seen. It was exposed to the air in a shallow dish containing a very little fresh water. In two hours after its removal, feeble respiratory movements could be occasionally observed. The breathing gradually became quite re-established, and seven hours after its removal it had recovered both sensibility and voluntary motion. The next day it seemed pretty well, and had resumed its colour, having been rendered nearly black whilst narcotised. The other frog also became much darker in colour, whilst under the influence of the spirit, in the previous experiment.

In the former of the above experiments the frog appeared to be in the second degree of narcotism, sensibility and voluntary power being impaired, but not abolished. In the last experiment the narcotism reached, and apparently rather exceeded, the fourth degree. The effect produced was nearly the same as that caused by one twenty-sixth part as much chloroform as the blood would dissolve, in one of the frogs, the subject of Experiment 15, formerly related; and rather more than the effect produced by one thirty-second part as much ether as the blood would dissolve, in a frog used in Exp. 28.

Exp. 49. The frog employed in Exp. 47, being in good health, was, four days afterwards, placed in the same jar with nine ounces of water, containing five fluid drachms of rectified spirit of 80 per cent., equivalent to half an ounce of absolute alcohol; the proportion of alcohol being, consequently, one in eighteen of the mixture. At first the frog made some attempts to get out. At the end of seven minutes it withdrew its head voluntarily beneath the surface, and ceased to breathe; but two or three minutes afterwards it raised it again above the surface, and breathed the air. Twenty minutes from the commencement, it appeared to have a difficulty in keeping its nostrils above the surface, and now and then made an abortive attempt to leap up. The eyelids were half closed, and the cornea looked dim. At the end of half an hour it was lying on its belly without any sign of life. A support was placed under it to keep its head above the surface, and feeble

respiratory movements recommenced. Three quarters of an hour from the beginning of the experiment, the respiration had entirely ceased, and no external sign of life remained. It was left an hour longer in the jar, and was taken out after being exposed to the spirit and water, and the vapour given off from it, for an hour and three quarters. No pulsation of the heart could be observed externally, but on removing a portion of the integuments and sternum with the scissors, the heart was found to be pulsating feebly. The frog was placed again in the spirit and water, being laid on its back, so that the heart could be observed. It was noticed to continue pulsating feebly for half an hour. Being left for two hours, it was found at the end of that time that the action of the heart had entirely ceased. As only one or two drops of blood were lost in exposing the heart, and as frogs at the temperature at which this experiment was performed (52° Fah.) can live almost altogether without the pulmonary respiration, it is probable that the action of the heart was arrested by the narcotic effect of the alcohol; and it was found in experiments 42 and 43, formerly related, that one eighteenth part as much of the vapour of chloroform as the blood would dissolve, had the effect of arresting the action of the heart in frogs.

Exp. 50. Two fluid drachms and a half of rectified spirit, equivalent to a quarter of a fluid ounce of absolute alcohol, were mixed with sufficient water to make up fourteen ounces, which, consequently, contained one part of alcohol in fifty-six parts. This was put into the glass jar before used, and a small gold fish, weighing two drachms and a half, was put in. The jar was covered, to prevent loss of spirit by evaporation. After a few minutes the fish seemed rather more active than before it was put in. At the end of twenty minutes it no longer regarded, or was frightened by, any object touching the jar, and it began to oscillate from side to side in swimming, and to incline to one side when still. Half an hour from the beginning of the experiment it was swimming very much on its side. It did not become appreciably more narcotised, although it remained in the water and spirit until two hours had expired. It struggled whilst being removed into fresh water. In half an hour after its removal it had partially

recovered, and when next observed, two or three hours later, it was in its usual state.

Exp. 51. Another small gold fish, weighing rather more than three drachms, was placed, in the same manner, in water containing one twenty-eighth part by measure of alcohol. In less than ten minutes the fish began to move about violently. Soon afterwards these movements became irregular and ill directed, the fish being unable to preserve the perpendicular position, and it no longer observed objects brought close to the jar. It continued, every now and then, to move about violently, and somewhat convulsively, till three quarters of an hour had expired, when it became quieter, floating on its side, and moving only occasionally. The opercula moved, but not regularly. At the end of an hour it had ceased to move its body and fins altogether, and a few minutes later it was found that the opercula did not move. It was placed in fresh water, and in a few minutes the opercula began to move, at first at long intervals, but in half an hour the respiration was regular, and the fish was beginning to move its body. The next morning it appeared quite well.

In Exp. 50 the fish was in the second degree of narcotism, and in the last experiment there was complete insensibility, and the fish would soon have died, probably not from absorption of additional spirit, but because the utmost extent of narcotism cannot be long continued without extinguishing the vital powers.

In some experiments with pyroxilic spirit, or wood naphtha, the same effects were produced on fishes, when it was mixed with water in the same proportion as the alcohol in the two last experiments; but the fishes died several hours afterwards, through the poisonous action of the naphtha, having first, in a great measure, recovered their sensibility and voluntary power.

The two following experiments are introduced for the purpose of showing that chloroform and ether act on fishes in the same way as on other animals.

Exp. LII.—Six fluid drachms of water in a small evaporating dish was placed on a plate of glass, by the side of a small dish containing chloroform; the two dishes were covered by a bell-glass, ground at the edge, to fit air-tight

on the glass plate, and left till the next day, in order that the water might be saturated with chloroform, by absorbing it in the form of vapour. As soon as the bell-glass was removed, the small dish of water was put quickly into two pints of water, in which a gold fish was swimming, in a glass jar capable of holding three pints, and the jar was covered to prevent loss by evaporation. In ten minutes the fish began to oscillate a little in swimming. At the end of twenty minutes it was swimming frequently on its side, and then again recovering its balance. Half an hour from the beginning of the experiment the fish floated for a minute or two on its side, at the surface of the water, without moving its body or fins; then it began to swim about again for a time, and it continued occasionally to move for a short time, and then again to appear lethargic, until it was removed and put into fresh water, three hours after the commencement of the experiment. It struggled a little whilst being lifted out of the water. In an hour it had in a great measure recovered, and next day was as well as before. The water saturated with chloroform composed a fifty-fourth of the whole, which consequently contained one fifty-fourth part as much chloroform as it would dissolve, and the fish was in the second degree of narcotism.

Exp. LIII.—A fluid drachm of ether was mixed with two pints of water, and a gold fish put into it, and the jar was covered, as in the former experiment. As water is capable of dissolving one-tenth of its volume of ether, the water in this experiment contained one thirty-second part as much as it would dissolve. The fish was but little affected during the first hour, but at the end of an hour and a half it inclined to one side in swimming. When two hours had elapsed it was floating completely on its side, and had ceased to move its fins. It was taken out and put into fresh water. It moved a little on being handled. In about ten minutes it began to swim, and the effects of the ether gradually and completely went off.

As the deeper degrees of narcotism cannot be long continued without dangerously depressing the vital action, so, with an agent which acts as long as those of alcohol, a complete coma can

without risk, especially if the body be exposed to a low temperature. Ordinary drunkenness does not exceed the second degree of narcotism; the popular term of dead drunk being often applied to a state of sleep from which the individual is still capable of being roused to a state of incoherent consciousness. In order to estimate the quantity of spirit that would be required to induce the second degree of narcotism in a man having the average amount of blood, 410 fluid ounces, which were taken as the amount of serum in the body in the earlier parts of this article, may be divided by 56, which will give seven ounces one drachm, a quantity of alcohol equal to rather more than fifteen ounces, or three-quarters of a pint of proof spirit. This is a quantity which, I believe, agrees pretty well with general experience. Less than twice this amount, if taken all at once, and on an empty stomach, so as to be quickly absorbed, ought, according to the above considerations, to prove fatal; and there have been many instances of such a result.

A few years ago a man drank a bottle of gin, in the Haymarket, for a wager. He was soon in a state of profound insensibility, and the late Mr. Read, the instrument maker, informed me that when he applied the stomach-pump at the police station, in the presence of a medical gentleman, the stomach was found to be quite empty. The man shortly afterwards died. The quantity of absolute alcohol in a bottle (twenty-four ounces) of strong gin is about thirteen ounces. In the fifth case in Dr. Ogston's paper on intoxication,* a woman lost her life by drinking less than a bottle of whiskey; and I believe that it is only by dividing the dose, and thus distributing its effect over a longer time, that any person can, with impunity, take a quantity of spirit exceeding this. The two bottles of wine which, when drinking was less unfashionable than at present, some persons could take after dinner, without being rendered altogether incapable, would contain, according to Mr. Brande's table, from nine to twelve ounces of alcohol; but this quantity was consumed during a protracted sitting, and after eating food, which would further retard its absorption. The difference in susceptibility

* *Edin. Med. and Sur. Jour.* vol. xl.

to the influence of alcohol, though existing to some extent, is not so great as it appears to be. The real difference is more in the way in which the mind is affected by it. A person who is excited evinces the effects of a moderate quantity, which are not so apparent on one who is not excited; whilst to make both individuals quite insensible, the quantity, as in the case of ether or chloroform, would probably not differ more than the size of the individuals, or rather the quantity of blood they might contain. With respect to the large amount of wine and spirits that patients in a state of extreme debility sometimes take without being apparently intoxicated, the following remarks may be made. Such persons are usually incapable of showing excitement under the influence of narcotics; and, as the alcohol is given in divided doses, which are insufficient to cause insensibility or coma, the effects which are really produced pass unnoticed. Long habit has some effect in enabling a person to take a larger quantity of alcoholic liquor: this, however, does not arise altogether from the diminished action of the spirit, but partly from experience of the muddled condition, which enables him to control his actions to some extent, and to go about his affairs with a sort of sober aspect when very unfit for business. The woman whose case is quoted above, and who was killed by less than a bottle of whiskey, was a drunkard; and, at all events, the habit of drinking alcohol has no power of enabling persons to increase the dose in the extraordinary manner in which that of opium can be increased.

The amount of anæsthesia from alcohol is apparently as great, in proportion to the narcotism of the nervous centres attending it, as from chloroform and ether. A case occurred in King's College Hospital illustrating this. On Thursday night, the 21st of December, 1848, Mr. Fergusson performed amputation of the leg on an elderly man who had just before sustained a bad compound fracture. The man was very drunk, and Mr. Fergusson informed me that he evinced but little feeling, and did not seem aware of what was being done. He called out once during the operation that he had the cramp in his leg. When I questioned the patient a day or two afterwards, he said

that he did not remember anything of the operation, and he supposed that chloroform had been administered to him. This, however, was not the case. Alcohol does not yield sufficient vapour, at ordinary temperatures, to cause insensibility by inhalation in a reasonable time; but, if no better means had been discovered, there can be no doubt that it would have been both practicable and allowable to prevent the pain of severe operations by getting the patient to swallow a large quantity of spirit and water. The end would have justified the means, and, in fact, rendered it as praiseworthy as it is disgraceful when resorted to for the purpose of supposed enjoyment, or to satisfy a craving which has resulted from a pernicious habit.

The general tendency of physiological researches had for some time been to prove that all the strictly animal functions resulted from the combination of the oxygen of the air with the constituents of the body, when Liebig* stated the position more fully and clearly than, as I believe, had previously been done. His attempted explanation of the physiological action of alcohol, which many persons were inclined to extend to that of ether, on its introduction for inhalation, is in accordance with these views, and is to the following effect †:—That, according to all the observations hitherto made, neither the expired air, nor the perspiration, nor the urine, contains any trace of alcohol after indulgence in spirituous liquors ‡; that the elements of alcohol combine with oxygen in the body, and that its carbon and hydrogen are given off as carbonic acid and water; that the elements of alcohol appropriate the oxygen of the arterial blood, which would otherwise have combined with the matter of the tissues, or with that formed by the metamorphosis of the tissues: and that thus the change of the tissues, and the muscular and other forces which would result from that change, are diminished. Whilst it may be admitted that alcohol diminishes the change of tissues and the functions connected with these changes, and will, indeed, be shown further on that this is true with regard also to the narcotic vapours treated of in this article, it can readily be proved that it is not by appropriating the oxygen in the blood that

* Animal Chemistry.

† Ibid. p. 239.

‡ This we shall afterwards find to be incorrect.

this diminution or suspension of the molecular change of tissues is effected. The following, amongst other considerations, show this:—First, the carbon and hydrogen of fat, starch, sugar, and gum, as Baron Liebig had the merit of showing, combine with oxygen in the blood, and are given off as carbonic acid gas and water; yet these substances are in no degree narcotic. Second, the carbon and hydrogen of chloroform, which in the laws of its action is almost, if not quite, identical with alcohol, could not possibly combine with oxygen sufficient to act in the way supposed. The amount of carbon and hydrogen in twenty-four minims of chloroform—the quantity which, as it was estimated on a previous occasion, exists in the blood of the adult in complete insensibility,—is only about four grains: an amount totally insignificant when compared to the oxygen which is continually absorbed in the lungs. And, third, if alcohol and the agents allied to it acted by appropriating the oxygen in the arterial blood, breathing air richer than usual in oxygen ought to prevent or arrest their narcotic action. But such is not the case: breathing even pure oxygen does not remove intoxication, or prevent or remove the effects of narcotic vapours. The latter point I have ascertained as regards both the human subject and inferior animals, and have seen insensibility kept up in an animal by the ordinary amount of ether vapour, whilst its skin was of a bright vermilion colour, from the excess of oxygen in the blood.

[To be continued.]

BLEEDING FROM THE EAR—ITS ORIGIN IN FRACTURE OF THE BASE OF THE SKULL, AND ITS PROGNOSTIC VALUE.

DR. S. PARKMAN lately had a case of this kind: the fracture extended across the whole base through the right petrous portion of temporal bone, and traversed the right lateral sinus, near its termination in the jugular vein. As regards the value of this as a prognostic sign, Dr. Parkman said it was plain to see that it was not impossible that fracture of the base should terminate favourably; the bleeding being external instead of internal, and compression being thus avoided. Bleeding from the ear is, therefore, not necessarily a fatal sign.—*American Journal of Med. Sciences*, Jan. 1850.

ON THE PRESENT STATE OF LUNACY, AND OF LUNATIC ASYLUMS,

AND ON THE NATURE AND TREATMENT OF MENTAL DERANGEMENT.

BY WILLIAM SMITH,

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[Continued from p. 453.]

In an interesting discussion which followed the reading of my paper before the Medico-Chirurgical Society of Nottingham, several experienced practitioners in that place took exception to several of the doctrines therein inculcated; and as my object is simply to elicit truth, and endeavour to throw light upon some of the more intricate phenomena of mental derangement, and especially to prove the intimate connection and close affinity existing between insanity, in all its varied forms, and the whole class of nervous, spasmodic, and convulsive disorders, I now take leave to defend my former propositions, and to adduce in support of them the recorded views of several highly distinguished physicians and surgeons, who have made the nervous system and its disorders their peculiar study. An extensive perusal of the excellent writings of Drs. Watson, Henry Holland, Calvert Holland, Sir Benjamin Brodie, and Mr. Travers, and the reflections arising therefrom, together with an attentive study of the phenomena daily presented to my observation in the pursuit of my professional duties, irresistibly lead me to the conclusion that the arbitrary, and often dogmatic, divisions of the nervous system into which professed physiologists have thought fit to divide the subject, have had a mischievous effect, by tending to narrow our views, and cramp our practice, in the alleviation of disease. How unphilosophical, for instance, to attribute the vis nervosa to the spinal marrow,—a separate function to the brain, and a third and totally different one to the ganglionic system; and further, to suppose,—taking into account their intimate union by means of connecting lines,—that is, the distribution of nervous filaments,—that any one of the great nervous cen-

tres can set up an action altogether independent of, and beyond the cognizance of the rest! Are such views in accordance with the fundamental laws of created matter, as presented to our view in the wide and boundless range of animated nature? As the poet Pope truly remarks:—

“ Nothing is foreign ; parts relate to whole ;
One all-extending, all-preserving soul
Connects each being, greatest with the least,
Made beast in aid of man, and man of beast,—
All served, all serving ; nothing stands alone :
The chain holds on, and where it ends, unknown.”

Does not epilepsy, with its state of profound unconsciousness and oblivion of anything occurring during the paroxysm, distinctly upset Dr. Marshall Hall's theory of convulsive disorders being confined to the spinal marrow? Look at the convulsive actions in apoplexy and encephalitis—diseases occurring in the brain itself. What says Dr. Hall himself, in his “Practice of Medicine?” “Encephalitis is sometimes marked almost solely by violent delirium, and it is then the phrenitis of nosologists; sometimes an early, if not the first symptom, is convulsion.” Is this in accordance with his own theory of convulsive disorders being confined to the spinal marrow? Again, if we come to analyse the symptoms of a paroxysm of epilepsy, a patient will tell you often that the first uneasy sensations were felt in the epigastric region, thereby proving that the ganglionic system is first implicated. Then comes a movement of one arm, then both; a sort of spasm appears to come across the throat and the platysma; and the convulsive actions of the arms (in one case lately seen by me) towards the throat indicated an involuntary and unconscious effort to remove the cause of the suffocation. What is the state of the brain blood during this epoch of the paroxysm, as evinced by the distended jugulars, the livid countenance, and the stertorous breathing? What would be the effect of introducing a tube into the trachea during this stage, as suggested by Dr Marshall Hall? The same idea occurred to myself the other day, whilst observing a most fearful epileptic seizure in a young unmarried female, with whom I remained for four hours, attentively studying the phenomena.

Dr. Henry Holland, whose “Medical Notes and Reflections” will always place him in a foremost rank amongst accu-

rate observers of the varied phases of disease, has some excellent remarks bearing upon my views of nervous disorders. In his chapter “On Morbid Actions of Intermittent Kinds,” he says —“It must still be admitted that there are many difficulties in the theory of these spasmodic disorders, depending in great part on their mixed relation to the animal and organic functions. Two distinct causes seem to be concerned, operating through different channels upon the same organs, separately sometimes, sometimes concurrently, and with every possible variety of combination in different cases. In these numerous conditions we have large scope for explaining the actual diversities which occur to our notice, both in health and disease. In some convulsive disorders, for instance, as hydrophobia and whooping-cough, it would seem that any direct influence of the sensorium is almost, if not altogether absent. In chorea more of this influence is perceived, modifying in various ways the aspect of symptoms, which yet belong chiefly to the class of automatic actions. In hysteria the interference is still more marked, and the circumstances become complex in proportion. Epilepsy presents altogether great difficulties, from its complication with apoplexy, paralysis, and other states of cerebral disease; and from its relation, at the same time, to so many other organs and functions of the body as exciting causes of its attacks. I can find no better general expression for the facts regarding this disease than that already given—viz., some abnormal distribution and action of nervous power, in which the brain and its nerves are chiefly concerned, and of which the accumulation and expenditure of this power seem to be a frequent or principal part. The effects on the circulation and respiration, as well as the convulsive motions, may all be received as subordinate effects; and even the singular phenomenon of the aura epileptica, in which the action seemingly begins from the extremities of nerves, is not more difficult of explanation under this view than by any other theory*.”

* “In that common but curious state called *fidgets*, we find certain analogous circumstances, though of minor importance. Here there appears to be (whether depending on a state of the circulation, or more directly of the nerves themselves) an accumulation of some cause of irritation, which requires muscular action for its re-

Now I would ask, comparing small things with great, whether we have not here in miniature what takes place on a grand scale in every paroxysm of active mania? Have not many furious lunatics felt this uneasy sensation, and begged as a favour of the resident medical officer of a lunatic establishment, or their ordinary attendants, to strap them up? Does not this fact strongly corroborate my views of insanity being a convulsive disease?—that the muscular powers, or the nerves which originate muscular action, are taken from under the control of the will? Look at the eccentric movements, again, of the hysteric female. Here, as that eminent authority, Sir Benjamin Brodie, tells us, “the function of volition is not exercised!” What does it import to the argument whether the function of volition be intentionally or unintentionally withheld? Look at delirium tremens, again. Can the patient control the tremors of the muscular system by an effort of the will? Is not the brain itself affected in delirium tremens? Look at a patient in the first or incipient stage of the general paralysis of the insane (I saw a most interesting case at the Royal Hospital of Bethlem the other day, and instantly detected the exact nature of the malady from observing the manner in which the movements of the feet were taken from under the control of the will—not unlike the *string-halt* in horses who have been hard-worked). Again, in bad cases of delirium tremens the power of the sphincter ani is not under the control of the will; the fæces cannot be retained. My opinion is, that in a state of health the influence of the brain is felt and responded to by every particle of the human body: it, like the sun in the earthly system, reigns paramount over every action and function of the human body; it, the nervous principle, accompanies the blood, and through their united action (something like the action of galvanism) every office necessary for man’s existence is performed. Blood and nerve, like soul and body,

lief. The effect so produced is, however, taken partially out of the power of the will, and testified by sudden, uncertain, or almost spasmodic movements, preceded by a sort of uneasy thrill through the limbs, which this action seems to remove for a time, but which returns with a regularity of interval often very distinctly marked. Illustration from these familiar sources is frequently of more value than that furnished by rare and anomalous cases.”

are one and indivisible—one cannot act without the agency of the other.

Dr. Holland further remarks—“It is an important question regarding these intermittent spasmodic actions, whether there is not in certain cases mischief or even danger in forcibly arresting them. It would seem, as I have before mentioned, that there are some conditions of body (or we may more explicitly say of the nervous system) where the amount of the exciting cause present at the time renders this expenditure in the form of convulsive action necessary for relief: (will not this argument apply equally to maniacal paroxysms?) The involuntary movements are a sort of outlet or discharge for that agent which, either by excess in quantity or intensity, or by some other manner of change inaccessible to research, has become a cause of undue excitement to the system, and require to be removed from it. (How does this doctrine agree with strait-waistcoats, solitary confinement, or narcotic and stupifying drugs?) These phrases may seem too mechanical, but illustrations of the reality of the fact will be found in many cases, particularly in the instance of the *vis epileptica* already mentioned. I have never seen, but have heard on good authority, of the serious mischief produced from suddenly arresting by mechanical force the convulsive motions of chorea. One instance has been related to me of fatal event, apparently from this cause, in a young child strongly affected with this disorder. In a singular case which I have lately seen of spasmodic twitching of the muscles of one side of the neck (very incessant, and of such violence that the head was forcibly drawn backwards and downwards, so as to touch the point of the left shoulder), the patient had apprehension, from his feelings, of any strong restraint put upon these motions, and considerable distress when it was attempted.”

Now I would ask whether we may not fairly and legitimately draw an analogy between these convulsive motions occurring in the *neuroses*, and the excessive mobility, automatic movements, and odd attitudes, assumed by lunatics? Is one part of the nervous system subject to one set of laws, a second part under a second administration, and a third totally and entirely different from the other two? Does not

the same agent, the blood, influence all alike? Is it in accordance with what we see around us throughout the range of animated nature, that an all-wise Creator who hath made all things, should be necessitated to employ such a complex and clumsy arrangement as this? I have no faith whatever in the doctrine that ascribes the *vis nervosa* to the spinal marrow exclusively; neither do I believe in Dr. Marshall Hall's theory of all convulsive diseases being dependent upon the spinal marrow alone. Look at epilepsy and chorea. As regards experiments of a torturing character upon the lower animals, I repudiate them entirely, and am content to remain in my present ignorance rather than obtain information from such a source. I doubt very much whether any solid and really substantial facts have ever been added to physiology by such experiments; and, if my memory serve me right, I think that excellent physician and ornament of our profession, Dr. Watson, has expressed some such opinion, or one very like it.

Dr. Holland, in his concluding chapter "On the present state of Inquiry into the Nervous System," remarks—"Limiting ourselves, however, to the simplest expression of facts, it is certain that there are constant variations in the amount of that power by which the mind and higher animal functions are maintained in activity, and associated with the bodily organs, and the world without. These variations occur among different individuals, forming in part what may be called the temperament of each; but they are yet more manifest in the same individual at different times. The deficiency is that which we most familiarly recognise: expressed, on the one hand, by the simple sense of exhaustion or fatigue of these functions, of which the cessation of action is the appropriate repair; on the other hand, by that more sudden collapse or loss of power of which we have frequent consciousness in life: sometimes without obvious cause; much more remarkably under the various accidents of disease. Acute pain, and generally excess of sensation, is a cause of such exhaustion; the violent or protracted exercise of the voluntary power in muscular action has similar and more obvious effect; and the same is produced by intent thinking, or by profound or painful emotions

continuously pressing on the mind. Exhaustion from any one of these causes (and we might, perhaps, add to them a less definite influence from the nervous system of organic life) has some common effect upon all,—not strictly to be measured by degree, but enough to show clearly a common character in the power which is the subject of these fluctuations. Though excess in its amount is less familiarly recognised than deficiency, yet is this attested by various phenomena, probably by many which are not usually thus interpreted. Admitting, indeed, its generation by a living action, this deviation from the medium state must be presumed to occur either by excess of such action or by default of expenditure upon the several functions to which it ministers. Many familiar examples might be cited where the augmentation, slight in degree, is testified only by effects compatible with health: increase of sensibility, and greater energy of the active powers, but under entire control of the will. These effects pass by regular gradation into the more extreme cases which constitute disease; and I cannot doubt that various morbid states not recognised in this light are really due to the excess of that which is the element of nervous power. Among these gradations many cases occur where there seems a necessity for disposing of the excess of the nervous energy; when slight in amount, by common exertions of muscular power; in morbid cases, by violent and irregular muscular acts which suddenly expend, or give an outlet to the force. In a former chapter (*On Morbid Action of Intermittent Kind*) I have spoken on this subject, adducing instances in epilepsy, and other spasmodic disorders, where the notions of accumulation, excess, and sudden expenditure, seem needfully to be involved; and interesting, moreover, as examples of this power, so effected, passing in great part out of voluntary control. Without repeating these, a further question may be added (also alluded to before), whether certain forms of mental derangement may not be owing to, or modified by, this excess? In mania especially, some of the symptoms might well receive this explanation,—such as the excited sensibility and irrepressible vehemence of action; the protracted muscular exertions without proportionate fatigue; and the en-

duration of long-continued wakefulness without obvious suffering."

I should not have thought it necessary to make these copious extracts, or, in fact, publicly defend the doctrines enunciated at Nottingham, had not my views been strongly objected to by two gentlemen in that place, whose experience and high standing in the profession entitled their opinions to my highest respect and attention. My object is simply an earnest desire to reach the truth; and if certain scholastic dogmas relative to points in physiology are at variance with the phenomena presented by disease, and, as I think, opposed to the fundamental principles of pathology and therapeutics, surely it is no presumption, in one who has observed disease on an extensive scale for fourteen years and upwards, to express his opinions thereupon.

It appears to me, that the excellent remarks of Dr. Henry Holland, just quoted, singularly and thoroughly substantiate the views recently propounded by me in the columns of the *MEDICAL GAZETTE*, not only as regards the nature or essence of mental derangement, but also its natural alliance to, or affinity with, the neuroses. I am strongly inclined to the belief that insanity, and the varied class of nervous, spasmodic, and convulsive disorders, are steadily on the increase in this kingdom, and that both are proceeding *pari passu*. I say this advisedly, as the result of my own observation of disease: although engaged in ordinary practice I see a great deal both of insanity and the neuroses. I have of late years greatly modified my practice with regard to depletion and antiphlogistic remedies: the diathesis we have to deal with now a days does not, as a general principle, bear depletion: such, at least, is my opinion, and I could quote numerous instances, especially in the disorders of females, where practitioners of the old school, stern advocates of the antiphlogistic regimen, and keeping their patients in bed on low diet, &c., have played grievous havoc with the nervous and excitable temperaments of their patients, and where an opposite line of treatment, fresh air, exercise, nutritious diet, the cold shower-bath, or sponging with salt and water, the exhibition of quinine, iron, &c., have restored the tone of the nervous, vascular, and assimilative systems. The mere exhibition

of drugs will seldom, if ever, cure hysteria: as that sagacious and observant physician, Pinel, has remarked—"the spasmodic affections of women depend almost universally upon some concealed or suppressed exertion of the passions." Many a case of nervous disorder has been cured by a plain gold ring, or papa's consent being given where previously it had been withheld. Nature will have vent some way: the artificial modes of society, the absurd practices of polite seminaries for females, and waiting for a suitable establishment, &c., have shipwrecked the happiness, and consigned to an untimely grave, or the confines of a mad-house (a bourne from whence such traveller will never return in this world) many an unfortunate couple: the organic laws of Nature cannot be broken with impunity. We watch with lynx-eyed vigilance over these matters as regards the lower animals—pet dogs, horses, cattle, &c., but cannot apply the principle to the genus homo—the masterpiece of creation.

In the 7th volume of "Dr. Ranking's Abstract of the Medical Sciences," is an excellent report on the recent progress of Psychological Medicine, by Dr. C. L. Robertson, from which I take leave to quote the following extracts:—"The idea that the pathological cause of all cases of mental derangement, or even of the majority, consists in morbid alteration of the structure of the brain, and in the presence in the same of some one of the products of inflammation, is beginning to be doubted by those best qualified to judge in the matter, and insanity is being regarded more as a functional than an organic disease. Indeed, it may be asserted, without fear of contradiction, that no pathologist could, in nine-tenths of the cases of mental derangement which prove fatal, take upon himself to say, from an examination of the brain, whether the person had, during life, been of unsound mind or not.

"Dr. Seymour has well pointed out the unsatisfactory relations in which morbid anatomy has contributed to our improvement in the understanding of cases of mental derangement, and hence, in the art of *curing*—the first great object of every physician's inquiries.

"Sir Benjamin Brodie told me that he had examined very accurately, with Mr. Tatum, surgeon to St. George's Hospital, the brain of a gentleman who

had been confined many years, nor could he ascertain any apparent alteration from ordinary structure. Many, many cases of a similar nature have occurred; but, above all, the numerous and permanent cures which have arisen from allaying functional disturbance, prove that mental derangement does not necessarily depend on organic disease of the brain. If a lunatic advanced in life dies of apoplexy, the effusion of blood or fluid into one of the ventricles of the brain, or, at least, the condition of the arteries which produced it, is considered quite enough to explain the preceding malady. In another case the blame is laid to the vesicles found in the choroid plexus; the observer forgetting that such cases occur in very large numbers, without any degree of mental aberration ever having been observed. At another time, adhesion of the membranes dependent on age, or complete ossification and obliteration of the sutures, have been quite enough to satisfy the observer, even though he finds the same appearance next day in a patient who has died of carcinoma of the rectum, or stricture of the bowel. And this was still more the case when all disease was considered to be the result of inflammation, acute or chronic; any appearance of thickening or increased vascularity, however old the former, or recent the latter, accounted, in default of other appearances, for the mental aberration of the patient. For example, several cases of post-mortem examination are related in the early part of the work of the late Sir W. C. Ellis. Now, I feel satisfied that in no one of these cases are there any appearances which I have not seen in patients who have died of disease wholly unconnected with disordered mind.

"Another circumstance," says Dr. Burnett, "which has not a little contributed to retard success in the treatment of insanity, and to divert the attention from this great object, has been the very conflicting evidence furnished by pathology, but especially by morbid anatomy. While one declares that the disease is inseparable from organic lesion of the brain, however local in its sphere, or microscopic in its character, another asserts that he has made autopsies without number upon the bodies of those who have died insane, not only in which no manifest alteration, either in character or consistence, could be

detected in the brain, but in which he has found a great variety of morbid changes present in the organs remote from the supposed seat of the affection."

From the results of my own observation of mental derangement, both in public lunatic hospitals and in private practice, during a period of ten years, I am irresistibly led to the conclusion that insanity, in its early and incipient stages, is essentially, in the great majority of cases, a *functional* disorder, and as such (if judiciously treated by those practically acquainted with the disease) a very *curable* and manageable disease: of course, where there is a strong hereditary taint, supposing both parents to have had it, the constitution will be more strongly saturated with the materies morbi, and the chances of recovery thereby materially diminished. Again, it unfortunately happens that the early stages of the malady usually come under the cognizance of those who do not entertain just views of its nature or essence: instead of viewing the disorder as one of *irritation* or *asthenia*, they view it as an inflammation of the brain, and use depletion and general antiphlogistic regimen, thereby adding fuel to fire, until at length the disease is rendered intractable, or absolutely incurable. Let the general practitioners of England and Wales have free opportunities of *clinical instruction*, by means of throwing open the wards of every public lunatic hospital throughout the kingdom—let government compel parish authorities to send off *instanter* their *insane poor*—remove the ban which society has most unjustly placed on this afflicted class of their fellow-creatures, and I will venture to predict that the fearful amount of chronic and incurable insanity now pervading this kingdom will be materially diminished. Putting humanity entirely aside, sound economy of the public revenues, and the services of many (often valuable and previously most intelligent) members thus cut off from rendering any service to the state, alike demand that an efficient remedy be speedily applied. "Prevention is better than cure:" the restless, ever grasping, money-getting, luxury coveting, discontented character of the present age, is quite sufficient to account for the present epidemic diathesis towards mental, nervous, spasmodic, and convulsive diseases. Let the age beware of the "*facilis descensus averni*,"

to which they, like Greece, Rome, and other mighty empires, are apparently hastening.

Belper, South Derbyshire,
March 1850.

[To be continued.]

CASE OF
DISPLACEMENT OF THE INFERIOR ANGLE OF THE SCAPULA.

By C. B. ROSE, F.R.C.S., &c.
Swaffham.

THOS. EAVY, 40 years of age, of rather a tall and spare form, an agricultural labourer, in March 1848 complained of pains over the upper part of the right scapula, extending up to the shoulder and back of his neck, without heat or swelling of the part; his bodily health was good. At the time of his first feeling the pains, he was employed in trimming and laying down a hedge, and banking. He was not at all aware of having sprained any part connected with the scapula or shoulder. About Midsummer of the same year he consulted me respecting his case, in consequence of finding that he could not use his arm with its former power, more particularly when he had an occasion to employ the hand above his head.

Upon examining him, I found that, when he raised his hand above the level of his shoulder, the lower angle of his right scapula left its natural position in relation to the ribs, and projected fully, if not more than, an angle of 45 degrees with the trunk; and also when his arms hung unrestrained by his side, the right scapula projected more than the left throughout its entire base. In whichever way he employed the limb, whether above head, or what is termed underhand, he felt the loss of power in it so much as to induce him to use the left (although a right-handed man), rather than his right hand, for all purposes of his labour.

In searching for information upon the pathological state and treatment of the case, I met with a nearly similar one in the eleventh volume of the Provincial Medical and Surgical Transactions, contributed by Mr. Banner, of Liverpool,—a case which appears to

have been overlooked by Mr. Callaway, when writing his Jacksonian prize essay. Mr. Banner considered the displacement of the scapula to be dependent on paralysis of the serratus magnus muscle. I therefore determined on trying the effect of galvanism. My patient submitted to its application once; but, not liking the sensations excited, I could not prevail upon him to have a repetition of the electro-magnetic shocks, and I lost sight of him for some months. He then called on me again; and, finding that the displacement and inconvenience resulting were pretty much *in statu quo*, I fitted to him a well-padded back-plate, which was kept steadily pressing against the scapula by shoulder-straps, and other straps crossing over the sternum, so as to keep the scapula in position, yet to allow of the action of the serratus magnus and other weakened muscles whenever they recovered their ability to act. He continued his labour. He wore the apparatus about six months; but, finding that it restricted uncomfortably the movements of the chest in respiration, he then laid it aside: still, it appears that he had worn it long enough to be greatly benefited by its application; and now, after having worked through the summer and harvest of the present year without it, I find that the scapula has recovered its normal position, and retains it during all the evolutions of the arm; and, therefore, that the patient is no longer unfitted for his occupation.

REMARKS.—The older surgeons afford no information on the subject of the above lesion. Wiseman, Heister, John Bell, offer not so much as an allusion to such a case; nor do I meet with anything relating to this abnormal position of the scapula till the late Mr. Liston's time. This eminent surgeon, in his "Elements of Surgery," (published in 1832) gives a short but graphic account of it, and also the treatment he recommended. In the table of contents to his work it is termed "dislocation of the scapula." He considers the displacement to be "occasioned by raising the arm above the head to an unusual extent," and that it is usually accompanied with some laceration of the fibres of that portion of the latissimus dorsi muscle which arises from the scapula.

The next notice of this displacement is the publication of a case in the 11th

volume of the Transactions of the Provincial Medical and Surgical Association (published in 1842), in which both scapulæ were affected, by Mr. Banner, of Liverpool. This gentleman, upon analysing the case anatomically, comes to the conclusion that the displacement arises from a paralysis of the serratus magnus muscle; but he does not clearly show the origin of the paralysis. It does appear that this accident is of somewhat rare occurrence, for it is but recently that a third notice has been given of it by Mr. Callaway, in his Jacksonian Prize Essay on the Shoulder-joint. Mr. Callaway adopts Mr. Liston's view of its origin. He has seen but one case of the kind, of which he evidently retains a very imperfect recollection, and has therefore written very briefly on the subject.

In our inquiry respecting the nature and cause of the lesion under consideration, it will be proper, in the first place, to study the relative connection subsisting between the scapula and the arm, at the time when the latter is employed in its various duties. The arm, in its ordinary employment, requires that the scapula be made a fixed point upon the trunk, which state is effected chiefly by the joint action of the levator scapulæ, the two rhomboidei, the serratus magnus, and that small portion of the latissimus dorsi which arises from the inferior angle of the scapula, the two latter possessing the entire control over the inferior angle, keeping it firmly *in situ* when they are acting simultaneously, and semirotating the scapula forward and backward when acting alternately. Now, when the arm is called into any *extraordinary* exertion, and particularly when it is found necessary to raise it somewhat inordinately, in order to effect a violent blow downwards, or for the purpose of *chopping*, it will be found that the serratus magnus acts consecutively to the deltoid, the supra and infra-spinatus, and trapezius muscles; or, as Mr. Banner expresses it, takes up the action of those muscles, and becomes a powerful agent in effecting the elevating, and therefore preparatory step. The antagonistic muscles,—the powerful pectoralis major anteriorly, and latissimus dorsi posteriorly,—are now brought into action, and complete the required evolution. By the same means, also, is the inferior angle of the scapula brought back to its natural po-

sition, *the serratus magnus relaxing to allow of its doing so.*

Keeping in view the above-mentioned phenomena, we will proceed to offer some remarks on the pathology of Eavy's case. About the time of his first feeling a defect in the use and power of his shoulder and arm, he had been engaged in a very laborious employment,—the chopping and laying down hedges,—a duty which would call the muscles of the shoulder into long-continued and violent action, more particularly the serratus magnus, during the preliminary step of the chopping action, and the latissimus dorsi in the final movement,—the two muscles which have the immediate control of the inferior angle of the scapula. Taking into consideration, then, that extreme fatigue of muscular fibre from long-continued action, a sprain of the fibres from their inordinate action, or sudden stretching and occasional rupture of the fibres through a want of synchronism in contraction and relaxation between a muscle and its antagonist, would deteriorate or paralyse the *vis in situ* of a muscle, we have at once a *vera causa* for the displacement occurring in the case I am recording.

It is thus seen that I consider an injury to the serratus magnus muscle has led to the malposition of the scapula in Eavy's case. It is also probable that in this case the fibres of the latissimus dorsi arising from the scapula have suffered a similar lesion, but not to the extent of rupture in either muscle, he never having complained of pain or tenderness in the site of those muscles.

With regard to the cause of the paralysis in the case published by Mr. Banner, it is manifest that in it a defect in the *nervous influence* existed, and that it was not limited to the muscles of the upper extremities; for Mr. Banner states that, "after stooping to a right angle to the lower extremity, he is quite unable to recover the erect position without help." Also, "from the commencement of the attack, the right lower extremity began to fail him, his gait becoming rather unsteady." If the representation of the case in the plate be a faithful one, it strikes me that the paralysis was not confined to the serratus magnus, but implicated *all* the muscles at the *base* of the scapula; and, if such were the fact, the mere *weight* of the arms would distort the scapulæ to

the extent there shown, which, to my mind, was the more probable cause of displacement in that particular case.

The treatment of these cases of displacement cannot be otherwise than simple and easy, for I do not conceive that any difficulties can arise in the reduction, or rather the replacing, of the scapula, and certainly cannot imagine the necessity for dividing the scapular fibres of the latissimus dorsi under any circumstances, as suggested by Mr. Cal-laway.

It is important that the bone should be supported and retained in its natural position sufficiently long to enable the muscle or muscles to recover their lost function, or, as Mr. Liston informs us, "the bone soon regains its former unnatural position, and continues to do so, however often and however easily it may be replaced."

The mode of retaining the angle of the bone in position is immaterial, provided the muscles be allowed just sufficient liberty for action, to enable them to recover their wonted tone. I prefer the back-plate, as adjusted in Eavy's case. Perhaps, the old-fashioned leathern stays, formerly used by the wives of the working classes, might be more comfortably worn, and prove equally efficient for the purpose required.

Swaffham, March 20, 1850.

LIGATURE OF EXTERNAL ILIAC ARTERY.

DR. S. PARKMAN exhibited to the Boston Medical Society a specimen, from a patient in the Boston Lunatic Asylum, under the care of Dr. Stedman. The patient, a lunatic, was stabbed by another lunatic with a carving knife on the outside of the thigh, just below the trochanter. The bleeding was so profuse, the knife having gone in front of the bone in the direction of the artery, that the femoral artery was tied by Dr. Stedman as it passes from under Poupart's ligament. Two weeks after the ligature separated, bleeding took place at the point where the artery was tied, and it was deemed advisable to tie the external iliac artery. After two weeks the patient died; the wound not having united, and gangrene of the extremity having taken place. The autopsy showed the parts around the artery undisturbed, with the ligature still *in situ*; a soft coagulum was just above the ligature, extending to the iliac bifurcation, but forming no satisfactory plug, and bleeding would have followed the separation of the ligature.—*American Journal of Med. Sciences*, Jan.

MEDICAL GAZETTE.

FRIDAY, APRIL 12, 1850.

THE grievances of the Assistant-Surgeons of the Royal Navy have been at length brought prominently before the House of Commons; but we regret to say, the just complaints of this much injured class of medical officers have not met with that reception which the profession had a right to expect. CAPTAIN BOLDERO and MR. HUME were the only two members who took upon themselves the responsibility of demanding from the Admiralty Board that redress which has been so long and unjustly withheld upon absurd and frivolous pretences. CAPTAIN BOLDERO prefaced his speech by the presentation of petitions from most of the London hospitals, from King's College, and all the Scotch Universities. The petitioners complained that "the accommodation provided for assistant-surgeons on board her Majesty's ships of war was inadequate and insufficient for securing the full benefit of their professional services;" and it may be observed that this is one of the very few subjects in which unanimity has been shown by the medical press and by the medical corporations of the three kingdoms.

In some remarks made about a year since on the conduct of the Admiralty towards naval assistant-surgeons, we considered in detail the arguments upon which their claims for better treatment and better accommodation are based.* An able writer, the third edition of whose pamphlet is now before us,† has placed the case of his junior medical brethren in so strong a light

* MEDICAL GAZETTE, May 11, 1848, vol. xliii. pp. 812 and 1036; also vol. xlii. pp. 755 and 973.

† An Exposition of the Case of the Assistant-Surgeons of the Royal Navy. By a Naval Medical Officer. 3d Edition. 1850.

that nothing but a feeling of official security in rejecting these claims, can have influenced the Admiralty Board in refusing that which in reason and justice they are bound to concede. CAPTAIN BOLDERO has taken the same view as the "Naval Medical Officer." He remarked that—

"As far back as 1805 it was agreed by the Lords in Council that the assistant-surgeons in the navy should be placed on the same footing as those in the army; but from that time up to 1838 nothing was done in the matter. In 1838 the commission appointed to inquire into the expenditure of the navy and army recommended that the medical officers of the two services should be assimilated as regarded rank, pay, and retiring allowances; and Her Majesty in Council ordered that recommendation to be carried into effect. Now, he wished some member connected with the Government would inform the House why the order of the Queen in Council had not been carried into effect. More recently the report of the Committee on Army and Navy Expenditure, appointed in 1847, had condemned the existing system. It was supposed that at that time the Admiralty was anxious to remedy the evils complained of, and they did what was very unusual with public men—parted with some of their patronage. They actually placed several appointments to the office of assistant-surgeon at the disposal of the Edinburgh College of Surgeons."

We will now turn to the pamphlet, to learn how this munificent piece of cockpit patronage was employed by the Edinburgh College.

"Some years back the Lords of the Admiralty were pleased to give authority to the Royal College of Surgeons in Edinburgh, to recommend, once in three years, one of their licentiates as a candidate for a Naval Assistant-Surgeoncy. In 1847, which was the first year after the College received this privilege, NO CANDIDATE PRESENTED HIMSELF. In 1848 only ONE candidate came forward! On both occasions extensive publicity had been given to the intention of the College to recommend.

"In fact, the utter failure of the attempt of the Fellows of the College to procure a competition of candidates has rendered altogether nugatory the privilege with which they were honoured by the Lords of the Admiralty.

"Whether any candidate would have presented himself afterwards must be mere matter of conjecture, for the College at this time 'RESOLVED NOT TO AVAIL ITSELF OF THE ADMIRALTY PRIVILEGE SO LONG AS THE ASSISTANT-SURGEONS OF THE NAVY WERE ALLOWED TO REMAIN IN A FALSE POSITION ON BOARD SHIP.'"

It will not be necessary to recapitulate the arguments adduced in our former articles on the expediency of placing Naval, on the same footing as Military Assistant-Surgeons. It is not so much a case for argument as for the simple exercise of justice. The terms of the order in Council are plain enough; and it is only the defenceless position of those to whom it applies, which has hitherto led to its successful evasion on the part of the Admiralty Board.

ADMIRAL DUNDAS, in opposing the resolution, brought forward that argument which is in great favour with the Poor Law Commissioners and economical Boards of Guardians—namely, that there was active competition for the office, and that therefore the accommodation could not be so bad as it was represented to be. It was stated by Sir W. Burnett in 1848, that there was then not one candidate for the office of Assistant-Surgeon; and from this statement we had concluded that the Admiralty had been made to feel the consequences of their own indifference to the complaints of the Naval Assistant-Surgeons. It is therefore with some surprise we learn from the speech of Admiral Dundas, that these ill-conditioned berths are as eagerly sought after at present, as medical appointments to Poor Law districts. Thus we are told:—

"Within the last two years 178 applications had been made, and the Ad-

miralty had at present on their list 263 names. On half-pay there were 23; there were eligible and waiting for appointments, 39; 11 only had been taken this year, in March. The argument, therefore, fell to the ground. The commission of 1840 increased the pay of the assistant-surgeons, which had been inadequate; and there had since been no difficulty in getting candidates. Having referred to the regulations, he begged to call attention to the consequence of introducing more officers into the wardrooms. The wardroom of the Queen was 26 feet long by 20 feet broad. There were 22 officers constantly in that cabin, and, if to that number were added three assistant-surgeons, with the others for whom admission might be sought, no fewer than 40 men would be assembled in an apartment not larger than the space from where he now stood near the foot of the table to the Speaker's chair. He saw no reason for altering the regulations at present; and he believed it was not the general feeling of the service that they should be altered; but he did not suppose for a moment that the officers of the navy were hostile to the assistant-surgeons. He should most certainly oppose the motion."

It would appear, therefore, from this statement, that the assistant-surgeons are their own enemies. If 263 applicants can be found to keep their names on a list for these appointments, it is pretty clear that they are furnishing to their opponents the very strongest argument against the introduction of any changes for ameliorating their condition. It is here, as in every department of the profession, that we meet with the sad effects of competition. Medical appointments, of whatever kind, are treated like mercantile speculations: they rise and fall with the demand.

Notwithstanding the opposition on the part of the Admiralty, the resolution of CAPTAIN BOLDEO was carried by a majority of eight, in a house of eighty-eight members.*

* It is desirable that our naval professional brethren should know who are their open enemies. We subjoin the list of the minority who voted against Captain Boldeo's resolution. The Members of the Board of Admiralty of course

We pass over the depreciatory remarks of CAPTAIN BERKELEY, as uncalled-for and unworthy of his official position. Assistant-Surgeons, in his view, should pass their lives in a cockpit and under the most degrading circumstances, because the *boys* with whom they are arbitrarily associated by the Admiralty, may have received an education at Rugby, Eton, or Harrow! By this statement the honourable member shows that he is looking at the question in a prejudiced view. Whatever may be the relative amount of education received by a Midshipman and an Assistant-Surgeon, the latter does not enter the service until he has reached the age of *manhood*, and gone through an arduous routine of study. The midshipmen with whom he is placed, whether Harrovians or Etonians, are still *boys*, and as such are no more fit to be his associates than they are to be the associates of the captain and first lieutenant. The place where they have received their education does not make them *men*, nor does it render them companions for such a class of educated gentlemen as the Admiralty Board now requires in the Assistant-Surgeons of the Navy. Yet upon so slender an argument as this, the honourable member thought proper to assert that—

"This attempt to place the assistant-surgeons over the heads of their superiors in rank in the navy, and their equals as gentlemen in every way, was one of the greatest blows that could be

voted against any additional trouble being imposed upon themselves; and the remainder of the list chiefly comprises men who occupy ministerial offices:—Hon. Colonel Anson; Rt. Hon. Sir F. T. Baring; E. G. Barnard; Admiral Berkeley; C. L. Berkeley; Hon. W. F. Cowper; J. Dalrymple; Lord Duncan; Admiral Dundas; Viscount Ebrington; Hon. J. E. Elliot; J. Evans; F. French; G. C. Glyn; Admiral Gordon; T. Greene; Right Hon. Sir G. Grey; B. Hawes; Right Hon. W. G. Hayter; T. L. Hodges; Sir J. Jervis; H. C. Lacy; Hon. W. S. Lascelles; G. C. Lewis; C. Lushington; W. Mackinnon; J. Martin; Right Hon. E. Maudslayi; H. K. G. Morgan; F. Mowatt; Lord Norreys; Viscount Palmerston; J. Parker; N. Power; Sir J. Romilly; F. C. H. Russell; Right Hon. Sir W. M. Somervell; W. R. Stansfeld; Lord H. Vane; J. Wilson. *Tellers*.—Lord M. Hills, R. M. Bellow.

inflicted upon the naval service of this country" (1)

The First Lord of the Admiralty, Sir F. BAREING, considered the resolution of CAPTAIN BOLDERO impracticable. As his statement may be considered as embodying the probable results of the motion, we here subjoin an extract from it:—

"The Admiralty could have no possible grounds for treating these officers other than as gentlemen; but there was great difficulty as regarded accommodation. In 1840 a commission was appointed to inquire into the subject, and they reported that on a full consideration they found there were practical difficulties in the way of making any arrangements which should accomplish what was desired in a satisfactory manner; and they added, that the accommodation which had been afforded of late years to this class of officers, rendered their proposed removal less essential than it might have been previously. They were, therefore, not prepared to make any recommendation in that respect. It was unfortunate that the house should by a resolution create expectations in the minds of these officers which, he feared, could not be realised. *The wish of the house was one thing, but the practicability of the proposal was another*; and, though there could be no disinclination on the part of the Admiralty to carry it out, he feared that it would not tend to the advantage of the service."

On this we would remark, that the practicability of any proposed improvement should never be allowed to rest upon the judgment of those who are opposed to the proposition. Such opponents will always invent difficulties, if they do not already exist. It really appears to us that there is a very great disinclination on the part of the Admiralty to carry out the wish of the House of Commons as expressed by the vote on this motion; and, if the Board will only resolve to lay aside former prejudices, and to treat this question as if assistant-surgeons were to be now provided with accommodation for the first

time on board of Her Majesty's ships, we entertain no doubt that proper accommodation would be speedily provided, and that this, contrary to the statement of the First Lord, would greatly tend to the advantage and improvement of the Naval Medical Service.

UNIVERSITY OF LONDON. THE NEW SUPPLEMENTAL CHARTER.

ON Tuesday last a special general meeting of graduates of the University of London and proprietors of University College was held at the College, to consider the supplemental charter recently granted to the University of London. The Right Hon. E. Strutt was called to the chair, and having introduced the business of the meeting, Mr. Key and Mr. Wood addressed it. The latter gentleman moved the first resolution, which was met by an amendment proposed by Mr. Sharp:—

"That whereas the charter of the London University empowers it to grant degrees after examination of the candidates, and does not empower it to grant degrees without examination of the candidates; and whereas the Senate by the new bylaw propose to omit a part of the Bachelor of Arts' examination in the case of gentlemen with certificates from the Universities of Oxford, Cambridge, and Dublin; and therefore this meeting of proprietors of the University thinks it right that all candidates should undergo the same Bachelor of Arts' examination, and disapprove of the proposed bylaw."

This having been seconded, Mr. Wood withdrew his original resolution, and the amendment having been put as a substantive motion was agreed to *nem. con.* Mr. Wood then moved the following resolution:—

"That this meeting regrets the acceptance by the Senate of the University of London of the supplemental charter, enabling them to grant certificates in isolated branches of knowledge, apart from any proof of the candidate having gone through a regular and liberal course of education." Professor Key seconded the motion, which was also agreed to. Mr. Wood then proposed the third resolution, which requested that the above resolutions should be sent to the Home Secretary and the Senate, with a request to Sir G. Grey to decline to sanction the charter by his signature. Mr. Warburton objected to the latter part of the motion, which was after a short discussion withdrawn, leaving only a few lines of the commencement.

Reviews.

Annales d'Hygiène Publique et de Médecine Légale. Janvier 1850.

Poisoning by binoxalate of potash.—The number of the "*Annales d'Hygiène Publique*" for January 1850 contains a report by M. Chevallier of the trial in France of a provincial pharmacien on a charge of homicide from negligence, imprudence, and inattention, in retailing two ounces of the binoxalate of potass in lieu of a dose of the bisulphate of potass, which had been prescribed by an officier de santé for a day-labourer of 28 years of age, on account of some dyspeptic disorder, in consequence of which the latter lost his life.

The charge was fully proved against the vendor, notwithstanding an attempt on his part to throw the blame on a wholesale dealer in Paris, from whom he asserted that he had procured the article in question as the sulphate of potass. In consequence of mitigating circumstances, the punishment was restricted to a fine of 500 francs. This fine, awarded on proof of the criminal charge, did not, however, include the whole of the penalty for the commission of this unfortunate mistake, as previous to the trial a civil action had only been withdrawn on the pharmacien consenting to the claim of the widow for damages to the amount of 4000 francs.

From the details of this trial we learn that the dose of the binoxalate of potash, which had been supplied to the patient in the state of powder, had been introduced into some vegetable soup (*bouillon aux herbes*), and that the greater part of the soup was administered to him by his wife early in the morning of the 16th of July, 1848; the speedy occurrence of vomiting alone preventing the exhibition of the remainder. At this moment the father of the deceased came into his room, to whom he expressed himself as a lost man. On this, without further remark or complaint to any one, the deceased is said to have gone out of the house to stool, returned immediately to his apartment, thrown himself on his bed, got up to stool again, and while there instantly fallen down on his side quite lifeless; the whole time from the swallowing of the

poison to his death not having exceeded ten minutes.

Post-mortem inspection.—Of the results of the post-mortem inspection, we are only furnished with the conclusion arrived at by the examiner, to the effect that "the condition of the interior of the stomach and of the intestines indicated that the party had succumbed to a rapid and violent inflammation of those organs, determined by a cause which could alone be ascertained by a chemical analysis of the matters contained in them."

The chemical examination thus suggested does not seem to have been instituted; but the residue of the soup, after some preliminary investigation of it on the spot, was put into the hands of MM. Chevallier and Lassaigne, who, on the application of the usual tests for oxalic acid and potass, found that the saline matter, of which it contained about two drachms, was the binoxalate of potass.

These chemists also examined a portion of the salt supplied to the patient from the stock of the vendor, and found it to contain a little admixture of the bisulphate.

The medical man who inspected the body, when examined on the trial, attributed the death of the labourer to the poison administered.

It further came out on the trial that a woman had nearly lost her life from swallowing a portion of the supposed sulphate, taken from the stock of a second pharmacien, which had been furnished to him by the accused. On this occasion the dose is said to have been a teaspoonful, taken in soup likewise, and to have been followed by colic and retchings, for which, the mistake having been luckily discovered in time, magnesia was successfully administered as an antidote.

Remarks.—One or two points in this case are deserving of our attention. The binoxalate of potass, though not recognised as a poison by the community, is a well-known article of commerce, sold under the names of "salt of sorrel" and "essential salt of lemons," and is justly regarded by toxicologists as little if at all inferior in activity to the oxalic acid itself; while the effects produced by it being due to the acid it contains, are consequently the same in both. In these circumstances the extent of the dose in the present instance was amply

sufficient for the production of the fatal consequences attributed to it. The time, too, within which death took place, though very short, is not without parallel in several recorded instances of actual poisoning with the acid and its super-salt, which rank very high in the list of active poisons.

The absence of any notice of corrosion of the stomach, notwithstanding the quantity of the salt swallowed, and there having been no opportunity afforded for the administration of any counter-acting antidote, affords an interesting corroboration of the statement advanced by Dr. Taylor, and assented to by Dr. Christison,—that, contrary to what was believed by the earlier toxicologists, the corrosive action of this acid is much inferior to that of the stronger mineral acids—a fact which we have verified in the case of the dog.

The singular rapidity with which the irritant effects of the binoxalate on the stomach and intestines (the duodenum?) seem to have been produced in the case before us, must be regarded as something surprising and unusual, even supposing, which is by no means unlikely, that the duration of the patient's life has been understated, and that the marks of "violent inflammation," somewhat vaguely deponed to by the person who inspected the body, had been but of such a kind as would have been more correctly designated those of *irritation*, rather than of inflammation strictly so called.

Be this as it may, the instance we are considering forms an instructive contrast with a few others to be found in works on toxicology, in which the action of oxalic acid and its soluble salts was observed to be exerted mainly on the nervous system, the vascular system suffering in a less degree. The quantity of the poison taken will not always suffice to explain this difference. An illustration of this came under our notice some time ago, the case being further remarkable for the length of time during which the patient's life was protracted after a full dose of the acid. This person, a respectable woman of 21 years of age, in consequence of some disagreement with a lover, swallowed an ounce of oxalic acid. Nearly three hours elapsed before medical assistance could be procured, and the usual antidote obtained. During the interval she had vomited freely, and continued to

do so at intervals for the next six hours, at the end of which we visited her in company with her medical attendant. Except a marked degree of languor and listlessness, and a feeble slow pulse, little peculiarity was observable in her condition. She made no complaint of pain, and showed no obvious marks of bodily suffering, though much distressed in mind on account of what she had done. She survived to the end of the sixth day, making little or no complaint, the lower limbs becoming almost wholly paralytic. With the exception of some difficulty in swallowing and in retaining food and medicine, there was nothing to indicate the extent of injury which must have been inflicted on the alimentary tube from the ingestion of the poison. The bowels continued very torpid throughout. We regret to add, that no post-mortem inspection could be obtained in this case.

Attempted poisoning by green vitriol. Is sulphate of iron a poison?—In this number of the journal we are also furnished by M. Chevallier with the report of the trial of a journeyman baker at Paris, for an ineffectual attempt to destroy his wife with the proto-sulphate of iron.

As cases of poisoning by green vitriol are not very common, we subjoin an abstract of the details:—

"— D., aged 21 years, was summoned before the Court of Assizes of the Seine, charged with the attempt to poison his wife. This couple had lived together on the best terms, and they had one child. In the month of March 1849, the wife suffered from a very severe diarrhoea. Her medical attendant prescribed a chalk mixture, which she found pleasant to the palate, and beneficial in its effects. One night her husband having forsaken his orderly habits, during his wife's illness, returned home at a very late hour. His wife was in bed, the curtains being drawn: she heard him take a paper from his pocket and crush something on the table, which she supposed to have been sugar. He placed a glass of medicine by her bed-side, which she drank, but found it bitter and nauseous. At seven o'clock D.— rose; his wife again heard him crush something on the table and mix it with her medicine. When she drank it she found it still more nauseous than before, and perceived that instead of white, the mixture was of a deep brown colour. Still she entertained no suspicion, but attributed the difference to the bottle, not having been properly shaken before.

Towards noon she became worse, and feeling drowsy she disposed herself to sleep. A third time she heard her husband crushing something on the table, and through an opening of the curtains she saw him add a powder to her mixture, and shake it up in order to dissolve it. The truth then was made evident to her. She charged her husband with his evil intentions: he denied the allegation, and endeavoured to destroy all evidence of his guilt. Some portions of the substance, however, were found in the room and on his person, and proved to be *sulphate of iron*. His motives remain undetected.

"The effects produced on his wife were severe vomiting, and purging of black evacuations (from the action of sulphur on the iron). The medical attendant considered her life in danger. Happily the symptoms subsided, and the patient recovered."

The case is chiefly noticed here on account of the decision arrived at by the tribunal (the Court of Assizes) after the examination of medical witnesses,—the president having merely put it to the jury to decide whether or not the accused had caused the illness of his wife by administering to her a substance which, *without being of a kind to cause death*, is injurious to health.

The 301st article of the French penal code formally excludes the sulphate of iron from the list of poisons; and the mode in which the judge left the question to the jury was founded on the medical testimony adduced. M. Chevallier declared that there is not one well-authenticated instance of poisoning in man with this substance; while of his two colleagues, the one stated that he did not believe it to be poisonous, because its unpleasant taste would prevent a person from taking it in sufficient quantities to produce fatal effects; and another said that it is not even dangerous! We need not say that this medical testimony is not in accordance with the views of our own best writers, and that on at least one occasion in this country a person was tried for administering the sulphate of iron as a poison, and on another its exhibition proved fatal. (Vide Taylor on Poisons, pp. 6 and 602; Christison's Treatise on Poisons, p. 507.)

The jury were of opinion that the intention to cause death had been established, and that sulphate of iron is a substance injurious to health. The prisoner was sentenced to five years' imprisonment.

The Diseases of Children. By FLEETWOOD CHURCHILL, M.D., M.R.I.A., &c. &c. 8vo. pp. 656. Dublin: Hodges and Smith. 1850.

THIS work, the author informs us, originates in an application made to him from America to write a work on diseases of children. Notwithstanding that Dr. Churchill had given up all thoughts of again appearing before the profession as an author, he "did not like to refuse so flattering a compliment, and the present volume is the result." On this "result" we congratulate British medical literature, which until lately, in the department of children's diseases, has exhibited a lamentable deficiency. The lectures of Dr. West, with the work before us, have largely contributed to the removal of a want which was severely felt on this side the British Channel. Until now, the few systematic works which we have possessed on the diseases of children could not bear a comparison with those which had appeared on the Continent. The comparison may henceforth, we think, be made to our advantage,—thanks to Drs. Churchill, West, Underwood, Maunsell, Evanson, and others.

We find, from the author's preface, that he endeavours more especially to draw attention to "the secondary affections—those which occur in the course of other diseases, and are in some intimate but obscure way connected with them almost in the relation of cause and effect." The great importance of clearly distinguishing these affections arises out of the complication and confusion which they introduce into the primary affection, "increase its danger, and often render it hopeless of cure." This is a portion of the history of infantile diseases which, as Dr. Churchill truly observes, has hardly received the attention it deserves. As described in some books on children's disease, the student might be led to suppose that children's diseases would be met with having the most definite characters, symptoms distinct, and course according to rule. In the book of Nature he will learn a different lesson, and Dr. Churchill's work will aid in the study of that book.

Dr. Churchill also does not fail to notice another very important element in infantile disease—viz. the prevailing epidemic, or the atmospheric constitution of the time.

Having indicated these two features on which the author lays some stress, we proceed to lay before our readers a fuller notice of the contents of this valuable manual.

The first part contains preliminary observations, remarks on the management of the infant at birth, on the food of infancy and childhood, on cleanliness, dress, &c., and on air, exercise, sleep, medicine, &c. The advice given on all points in this part of his work are most judicious, and will be found of the greatest utility to the inexperienced practitioner.

The second and remaining part of the work treats of the diseases of infants and children, and is divided into six sections, which we shall briefly notice in the order in which they are set before us by the author.

SECTION 1—Diseases of the nervous system—includes intra-uterine and congenital diseases, cephalæmatomata, fractures of the skull, irritation of the nervous system, trismus, chorea, convulsions, acute meningitis, chronic meningitis, encephalitis, tumors of the brain and spinal marrow, congestion, and apoplexy.

Among intra-uterine diseases the author enumerates convulsions, hydrocephalus, absence of brain or skull, hernia cerebri, and spina bifida.

The chapter on cephalæmatomata contains a large amount of information on a class of cases which, from their infrequency, are perplexing when met with. The references are, however, almost exclusively to foreign writers. We would take occasion to point out that much valuable information on these cases is also to be found in the British journals.

Convulsions are classified by Dr. Churchill as—1. primary or essential convulsions arising from irritation of various kinds, mental emotion, &c.; 2. sympathetic, occurring in the course of fevers or organic diseases of any kind, excepting those of the brain or spinal marrow; and 3. symptomatic, connected with diseases of the head or spine.

We quote the following in reference to the treatment of these cases, as conveying several points of great practical interest:—

"It may be that these measures (lancing the gums, the warm bath, &c.) will relieve the paroxysm; but whether or not, the

next question is, as to the propriety of abstracting blood. Almost all writers are in favour of it, and whatever experience I have had only confirms their opinions, with very few exceptions. . . . But in severe cases of primary convulsions, when the pulse is quick, the face and head flushed, and the paroxysm well marked,—in sympathetic convulsions, at the commencement of diseases of the lungs or of the abdomen,—in the febrile diseases of children, or during their course if the child be strong,—and in symptomatic convulsions at the outset of cerebral disease,—there is no doubt in my mind that a liberal application of leeches is of the greatest service. It is not enough to apply one or two leeches; but, *e. g.*, to a child of a year old six at least ought to be applied, *and the bleeding stopped when the leeches detach themselves*. I must strongly protest against the ordinary plan of allowing the leech-bites to bleed indefinitely: more blood is thus often lost than was intended, and it is quite impossible to form any precise estimate of the quantity desired or actually taken, unless by arresting the hæmorrhage at a given time." (p. 103.)

The rule here laid down with regard to the application of leeches in convulsions applies to every other case in which it may be deemed advisable to deplete by their aid. Each leech will draw from one to two drachms, and hence a basis is afforded for the formation of an estimate of the number to be applied. This, as every practitioner will admit, is a most important point in infantile therapeutics. The hæmorrhage from leech-bites in children, at all times uncertain, is more easily arrested at an early than at a late period; and it will be within the experience of most men that they have not unfrequently been called upon to remedy effects of injudicious leeching more serious than the original affection which called for their employment. This point, therefore, demands the attention of the readers of Dr. Churchill's work, as he is, so far as we remember, the first author who has laid sufficient stress thereon.

Among the remaining chapters of this section our readers will find those on acute and chronic meningitis and encephalitis especially deserving of their close study.

SECTION 2—Diseases of the respiratory organs—comprising coryza, epistaxis, spasm of the glottis, pertussis, croup, bronchitis, pneumonia, and pleurisy.

We extract a few observations from the chapter on spasm of the glottis—an essay, complete in itself, on a disease concerning which much that is contradictory has been written.

The author justly objects to the various names which have been applied to this disease, as being for the most part inaccurate, and many of them conveying erroneous ideas of its pathology; e. g., "Millar's asthma," "Kopp's asthma," "thymic asthma," "suffocative catarrh," "false croup," "spasmodic croup," "cerebral croup:" whereas, as Dr. Churchill remarks, "it has no affinity at all either to asthma, catarrh, or croup."

The profession is indebted to Dr. Simpson for the first clear record of this affection. Dr. Churchill notices the chief subsequent authors also.

In the author's detail of symptoms may be seen the means of diagnosis from croup, &c. We are of opinion that its confusion with croup is chiefly owing to the fact that the attack itself is rarely witnessed by the medical attendant, as it is usually of brief duration, and occurring mostly at night; whence it happens that the account of symptoms is derived from the friends or attendants of the patient. By attending, however, to one or two important features which are pointed out by Dr. Churchill, we think the error should less frequently occur than we feel confident is the case. The diagnosis is here of the first importance, the treatment in the two cases differing widely.

Dr. Churchill points out that the most prominent and distinctive symptom, that of the crowing sound, arises rather from a forced inspiration consequent on previous spasmodic closure of the rima glottidis and larynx, than from a spasmodic inspiration. This we may here observe constitutes the essentially diagnostic characteristic between this and croup: the latter is an acute inflammatory attack, to which is superadded spasmodic action of the muscles of the larynx; the former is of a purely spasmodic nature, as shown by close observation of the order of symptoms; first the spasm of the laryngeal muscles, then the forced inspiration to overcome the obstruction,—an effort, however, not always successful, as seen in those cases where the attack has at once and instantaneously proved fatal. Concomitantly, also, with this local spasm, con-

vulsive action of the muscles of the hands and feet is very frequently met with, and aids the diagnosis. The absence of all febrile symptoms will also serve to distinguish laryngismus from croup.

Dr. Churchill states the various views of the pathology of this disease, and divides these under three classes—"1. Those which adduce the evidence of irritation in the central nervous system; 2. Those which attribute the affection to pressure upon some particular nerve; and 3. Those which look upon enlargement of the thymus gland as the '*fons et origo mali*.'" Dr. Churchill disposes of the two latter supposed causes, and adopts the view of Dr. Marshall Hall, who regards the symptoms as arising from an "excitation of the true spinal or excito-motory system."

The treatment of this disease (when clearly made out) has given rise to much less diversity of opinion than have its causes. The removal of dental or gastric irritation, and the improvement of the general health in the intervals of the fits, constitute the chief indications. On this portion of the subject we would direct especial attention to some admirable observations on change of air, in this affection, by Mr. Robertson, of Manchester, published in the seventh volume of the present series of the MEDICAL GAZETTE.

Dr. Churchill regards whooping-cough, also, as depending on deranged reflex action. Thus—

"Now, without attributing it to organic disease of the brain or spinal marrow, we cannot but refer the peculiarity of this cough and whoop to a state of the nervous system analogous (shall I say) to that which gives rise to spasm of the glottis. In other words, that whooping-cough is also a case of reflex irritation of the nervous system, excited, no doubt, by other and different causes, but exhibiting a similar transference of effects. We are at present, I believe, quite ignorant of the nature of the peculiar exciting cause: we know that it exists, and that when it is applied the primary irritation of the mucous membrane arises, followed by the reflected nervous irritation, which gives rise to the peculiar phenomena of the disease." (p. 215.)

SECTION 3 embraces the diseases of the heart, malformation, pericarditis, and endocarditis. The chapter on cyanosis presents a very full history of this morbid condition. Dr. Churchill enume-

rates the abnormal formations to which it has been attributed: to these we add the apparent cause in a case which some time since came under our own notice. This was a varicose state of the pulmonary veins, which were enlarged and irregularly dilated, and exhibited a coarse net-work arrangement. This was the only morbid condition found in the case. The child was six years old, and having been the subject of cyanosis from birth, at last died suddenly.

SECTION 4. *Diseases of the digestive organs*, including a numerous catalogue of diseases the most common, but not the least important among those to which infant life is exposed.

Under "dentition," the author gives some useful hints in reference to lancing the gums.

Dr. Churchill's description of the affection of the mucous membrane of the mouth, known as Muguet, often confounded with Aphtha, contains a very full history of its symptoms and treatment. We quote the following remarks on its pathology:—

"Careful and repeated investigation has established beyond dispute essential difference between muguet and aphtha. Muguet is not seated beneath the mucous membrane generally, nor does it involve the destruction or disorganization of that tissue. It is curdy matter deposited upon the surface, quite removable, and which, in fact, is constantly thrown off, leaving an unbroken surface beneath. What, then, is this matter, and how does it originate? Opinions differ upon this point. M. Auvily and others have regarded muguet as a disease of the mucous follicles; but the minute researches of M. Lelut seem to have refuted this opinion, inasmuch as he never could detect any prolongation of the false membrane into these follicles, but found it perforated at their orifices; and this observation upon the living was abundantly confirmed by careful examination after death." (p. 383.)

M. Gruby considers muguet to be a vegetable parasite, composed of a mass of cryptogamic plants. Dr. West inclines to the opinion that it is a false membrane. Dr. Churchill does not attempt to decide, resting content with the fact that the disease may be cured without reconciling these microscopical difficulties and doubts.

SECTION 5, *Diseases of the skin*; SECTION 6, *Eruptive fevers*; and SECTION 7, *Infantile remittent fever*, conclude the volume.

We cannot further extend our remarks upon, or extracts from this volume. Suffice it to say, that notwithstanding certain omissions, it is with more than ordinary confidence that we commend this work to the study of all those who would desire to learn the peculiar features of infantile disease, and more especially to those who may desire a well-condensed compendium of all that exists in the literature of the same class of diseases. The author has set forth a vast amount of personal experience in the clearest way, and has at the same time furnished his pages so abundantly from all other writers, that his volume constitutes a complete bibliography of the diseases of children. By Dr. Churchill's work, and Dr. West's lectures, the practitioner is brought up to the actual state of the pathology and treatment of infantile or children's maladies. A very great advance is manifested in the accuracy with which each disease is discriminated, and the care which is bestowed in the study of their treatment, as represented by these British standard works on the Diseases of Children.

Surgical Anatomy of the Arteries, and Descriptive Anatomy of the Heart. By the late VALENTINE FLOOD, M.D. New edition, by JOHN HATCH POWER, M.D., &c. &c. Small 8vo. pp. 189. Dublin: Fannin and Co. London: Longmans. Edinburgh: MacLachlan. 1850.

This is a very good manual of the anatomy of the arterial system. The present editor has added to the descriptive anatomy, and has also contributed to the surgical anatomy of the great trunks. The cure of aneurism by compression; the hepatic and renal circulations; the treatment of aneurism by ligature on the distal side of the vessel,—have been fully given by Dr. Power.

The details of descriptive anatomy are relieved by useful and interesting physiological and practical considerations. The editor has succeeded in his endeavour to present the student with a work "comprehensive without being voluminous," and "as concise as is compatible with clearness and simplicity." It is a work which will be equally useful to the practitioner and the student.

Proceedings of Societies.

PATHOLOGICAL SOCIETY OF LONDON.

DR. LATHAM, PRESIDENT.

March 18, 1886.

MR. FERGUSON exhibited

1. *Specimens of Echinodroma on Metacarpal Bone and first phalanx of middle finger, removed from the hand of a middle-aged female.*

The disease had been present about three years, and had caused exquisite suffering. Pain was so constant and severe as to render the hand useless. Before the operation, the swellings (one about the size of a chestnut, the other about that of a hazel-nut) seemed to involve the bones; but, on examination afterwards, each growth seemed to spring from the periosteum. The smallest tumor (that on the phalanx) sprung from the periosteum in front of the bone, and involved the front part of the sheath of the flexor tendons. There were none of the digital nerves involved in these growths. He referred to them as being rare examples of such tumors being painful. Various casts and other preparations showing the ordinary appearance of tumors connected with the metacarpal bones and phalanges were also exhibited.

Also

2. *The Articular Extremities of the Bones of the Elbow, showing the condition requiring excision.*

This operation had been performed a fortnight before. The olecranon and coronoid process of the ulna, the head and cervix of the radius, and about one inch of the humerus, had been removed. Other preparations were exhibited, showing similar diseases. In some of them excision had also been performed; in others, amputation had been resorted to.

MR. TOYNBEE produced an extensive *Series of Preparations illustrative of the Diseases of the Membrana Tympani.*

He remarked that time would not allow him to do more than indicate briefly the principal pathological conditions to which this structure is liable. In the first place, he would point out the diseases to which each of the component structures of the membrana tympani is liable, independently of the others; and, in the second place, describe those in which all its structures were implicated.

The external or epidermoid layer of the membrana tympani is found in two diseased states; the first is hypertrophy, in which it becomes many times thicker than natural, and forms a dense laminated mass, which adheres to the outer fibrous layer; the second diseased state is where it is slightly thicker than natural, its surface being studded by numerous small round masses, and in this state it adheres to the fibrous layer much more firmly than natural. Before referring to the diseased conditions of the fibrous lamina, it is requisite to observe that it not only consists of two sets of fibres, the radiating and circular, but these sets of fibres form two distinct layers, easily separated from each other, and subject to diseases wholly independent of each other. Thus it will be often found that the outer or radiating fibrous layer is thicker, whiter, and more dense than natural, while the internal circular fibrous layer is perfectly healthy. In other cases, the internal layer is much thickened, while the outer layer is translucent and healthy. The external surface of the outer layer is frequently the seat of chronic inflammation, when it becomes very thick and vascular, and is covered by granulations of a deep red colour; polypi are also developed from it. Chronic inflammation of the outer layer of the membrana tympani frequently induces ulceration, by which process portions of one, often of both of the fibrous laminae are destroyed, while the mucous membrane remains entire. In cases where only a small portion of each of the fibrous laminae has thus been removed by ulceration, a deep depression exists, caused by the mucous membrane bulging inwards. Where much of the fibrous coats has been destroyed, the mucous membrane falls inwards towards the ossicula and promontory, and becomes adherent to them. The fibrous layers are also the seat of calcareous deposit. The internal mucous lamina of the membrana tympani, which, in its natural state, is so thin that it is frequently difficult to detect its presence, becomes thickened by chronic inflammation, and is sometimes so much hypertrophied that its inner surface is in contact with the promontory. In acute inflammation, lymph is effused from this mucous layer, and bands of adhesion are formed which connect it to the ossicula or to the inner wall of the tympanum.

The diseases of the membrana tympani in which all its component structures are at the same time affected are the following:—

1. *Hypertrophy*, where the epidermoid, fibrous, and mucous layers are thickened. This not unfrequently proceeds to so great

an extent that the membrana tympani is ten, or even twenty times its natural thickness, and it becomes opaque, hard, and dense, like a piece of cartilage.

2. *Ulceration*, where all the layers are destroyed wholly, or only in one part, so as to cause a perforation.

3. *An increase of the external concavity*, so that its external surface is in contact with the promontory, to which it is frequently firmly adherent.

4. *An absence of the external concavity*, in place of which it is perfectly flat.

5. *Scrofulous degeneration*, in which all the layers lose their natural structure.

6. *Calcareous degeneration*, in which there is often not a vestige of healthy structure in any of the layers.

7. *An increased degree of tenseness*.—This state is most frequently accompanied by the presence of membranous bands, which connect its inner surface to the promontory, stapes, or other parts of the inner wall of the tympanum.

8. Sometimes the whole of both fibrous coats are destroyed by ulceration, and the mucous layer remaining entire falls inwards, and covers the surface of the promontory and the inner wall of the tympanum.

9. Sometimes one half of the membrana tympani is destroyed, and the border of the remaining half becomes adherent to the inner wall of the tympanum, forming a closed cavity.

10. The entire substance of the membrana tympani is sometimes ruptured. The part most subject to rupture is that between the posterior margin and the handle of the malleus.

Mr. MITCHELL HENRY exhibited a specimen of

Malignant Disease of the Lung,

with a bladder having deposit beneath the mucous coat, and a cyst, the size of a small orange, below the opening of the left ureter.

A man, *æt.* 50, had for several years distressing irritability of the bladder. He was admitted into the Middlesex Hospital under Mr. Moore. He had been passing small prostatic calculi from the urethra, with pus, mucus, and offensive alkaline urine: the irritable state of the bladder was now such that he passed water every half hour. He had a very slight cough, without pain or expectoration. At no time did he complain of his chest as a cause of uneasiness. The countenance was heavy and sallow, more so than is usual in chronic affections of the urinary organs. Under treatment the bladder became less irritable, and the urine neutral. He was

attacked with acute pleurisy, and died two days after.

Post-mortem examination.—Body much emaciated. The right pleura had been acutely inflamed, and was covered with dense lymph. In the centre of the middle lobe of the right lung a mass of encephaloid disease, as large as an egg, was deposited. This varied in consistence, being in parts tolerably firm, in others soft or creamy, and in one or two spots vascular and bloody. Originating at the root of the lung, at the division of the bronchi, it had perforated the latter, and into it projected a nipple-shaped process of the growth. The glands at the root of the lung were healthy. It was made up of cells of every size and shape, arranged in a regular manner, and without much intervening fibrous structure. Many of these were elongated or caudate, and contained numbers of nuclei. Some of them represented small mulberries. The other viscera, except the bladder, were healthy. The bladder was small, thickened, and contracted, containing a small quantity of most fetid urine. The mucous membrane softened and shreddy, varying from a dark brown to a green or gray colour. Beneath it were deposits in various parts of a dirty white colour, not elevated above the surface, and varying in size from a hemp seed to that of a split almond. At the side of the bladder, and communicating with it, projected a cyst of thickened mucous membrane. Its inner surface was inflamed, and, like the bladder, there were deposits in it, which were at first supposed to be similar to that in the lung; but microscopically examined they were found to consist of epithelial scales, mixed with lymph and oil globules, differing in nothing from the products of long-continued inflammation.

Mr. COULSON exhibited a specimen of
Stricture of the Œsophagus.

A man, aged sixty-five, complained a few months ago of pain a little below the cricoid cartilage; this was followed by sickness and difficulty in swallowing, which symptoms continued till his death. On examination, the Œsophagus was found constricted three inches below its commencement by a morbid growth, firm and hard to the touch, situated between the membranous portion of the trachea and Œsophagus, and projecting on either side, but principally on the left: its calibre at the diseased part would only admit a goose-quill; and below the contraction there were some irregular excavated ulcers, with well-defined edges, and the bases of an ash grey colour. In the centre of one of these there was a small earthy deposit. The lining membrane of the trachea was more vascular than natural,

and at one part was pushed forwards by the growth behind. Under the microscope numerous broken-down cells were seen united together, forming an indistinct mass, with scattered patches of well-defined elongated cells, having a distinct nucleus and nucleolus, but none of a decidedly malignant character. There was also a great quantity of fat deposited in various parts of the body, especially on the surface of the pericardium and the heart. This organ was also exhibited.

Mr. CHALK exhibited a specimen of
*Cancerous Ulceration of the Foot, with
Caries of the Tarsal Bones.*

A ship-rigger, æt. 65, of herculean frame and good constitution, had talipes varus of both feet, for which, with a view of relieving the deformity, the legs had been punctured during infancy. Thirty-six years since a small wound occurred on the right foot, which frequently healed, but only for short periods. It was never attended with much suffering. Two years after the wound on the right foot a large abscess formed on the left, subsequent to which cicatrization was never complete. Two years ago there was an ill-conditioned ulcer, about the size of a crown-piece, on the dorsum of the foot. He suffered occasional and severe pain. The sore gradually increased in size. Eight months after, carious bone was detected, and several small portions were removed. It was hoped that the ulcer depended on the caries: but as successive portions of bone became detached, fungoid granulations sprung up, accompanied by excruciating pain in the surrounding integuments. During the last six months no benefit was derived from treatment. On the 28th of February the ulcer, which occupied the whole of the dorsum of the foot, bled to the amount of twenty ounces, and produced a visible effect on his health. Mr. Shaw concurred in thinking that amputation was the only remaining alternative. As the integuments of the leg were tense, swollen, and had been frequently the seat of erysipelas, it was determined to remove the limb above the knee, which was accomplished by the flap operation March 14th: since then the patient has been doing well.

It is somewhat extraordinary that the sore should have existed so many years without presenting signs of its malignant character until within so short a time. The microscopic examination showed the fungus to be epithelial formation, consisting principally of epithelial cells.

Mr. SOLLY exhibited an
Enchondromatous Tumor,
about the size of a bantam's egg, which he

removed from the internal side of the parotid gland. It was necessary to cut through that gland to reach the tumor. It was exhibited more on account of its relative position to the gland than to illustrate a disease which is now so well understood. The parotid gland was perfectly healthy, and the tumor was separated from it by a dense fibrous capsule. The tumor was firmly attached to the deep process of the cervical fascia, which covers the external carotid behind the ascending ramus of the jaw. After its removal the pes anserinus of the facial nerve was distinctly exposed, but not divided.

WESTMINSTER MEDICAL SOCIETY.

March 16, 1860.

PROFESSOR MURPHY, PRESIDENT.

Death from Hemorrhage into the Bladder.

DR. WARDELL exhibited to the Society a pathological specimen, consisting of a diseased bladder, with left ureter and kidney attached. He gave the following particulars of the case:—On the 26th of January, Dr. Smith, of Kensington, was requested to visit G. E., a farm-labourer, seventy-three years of age, of middle stature, muscular system well developed for his time of life, and who was reputed, until lately, to have enjoyed good health. He looked pale and sunken in the features, rendering it evident, even to a cursory observer, that a serious malady was present. He complained of frequent desire to urinate, and whenever he attempted there was considerable pain. On an effort being made, a few drops were passed, but these consisted chiefly of blood. There were great distension and dulness on percussion at the inferior part of abdomen; no fluctuation was perceptible; the catheter passed without difficulty, and, on entering the bladder, the instrument imparted to the touch the feeling of entering into a more resisting medium than could be given by a mere fluid; it felt as if penetrating a loose and easily lacerable coagulum, or some thick viscid substance. No fluid escaped, with the exception of a few drops of blood. Pulse 80, weak and compressible; lips pale; tongue blanched, and loaded with a pasty coat; skin moist and flabby; complained of no pain when quiescent. Ordered castor oil; to be placed in a warm hip-bath for twenty minutes, and to have an anodyne draught. It was stated, that in March last the deceased had received a violent blow over the left hypogastric region, by running forcibly against a low door, which at the time caused considerable pain, but this soon passed off, and gave no un-

cessness afterwards; therefore no further notice was taken of the accident. For some months past he did not pursue his ordinary occupation, consequently a general and an increasing weakness. During the six weeks previous to his decease the urine was mixed with varying quantities of blood, and it is presumed, from the questions elicited, that for a longer space of time the excretion had been of a sanguineous character. For the last ten days of his life an increased quantity of blood was voided. The patient sought no medical advice previous to calling in Dr. Smith, on the 26th January. Three weeks before his death he had been an inmate of Middlesex Hospital, where he had gone for hydrocele. He was tapped for that affection, and speedily recovered. On the morning of the 27th the catheter was again introduced, and it still seemed to pass through some substance that offered a slight resistance. Some fluid dribbled away, consisting of blood and urine. Complained of no pain, nor desire to urinate; pulse weaker, and general symptoms of more alarming character. Took every three hours doses of lead, opium, and acetic acid. In the evening he was much in the same state, and it was reported that since the visit in the morning he had taken a tolerable quantity of beef-tea, and had drunk some rum-and-water, which had been ordered in the event of faintness supervening. On the 28th it was said that he slept continuously during the greater part of the night; pulse smaller and quicker. Towards morning he had a fit, evidently of an epileptic character. During the day he had several fits of a similar nature, and in these there was considerable twitching. He died in the evening.

The autopsy was made fifty hours after death. Surface considerably blanched, without signs of general emaciation. On removing sternum, anterior edges of lungs were of a light-grey, emphysematous character, and pericardium was covered over a greater extent than natural. Pulmonary pleura on both sides extensively adherent by firmly organized bands of lymph. Parenchymatous structure, except at anterior edges, presented no marks of disease. Heart large; left ventricle two lines thicker in its walls than usual; right ventricle capacious, walls attenuated, and external surface partially covered by a thin stratum of fat. On minute examination, adipose matter did not insensibly blend with muscular fibrille, as witnessed in cases of true fatty degeneration of that organ. Edges of each of aortic valves thickened by calcareous depositions. Other valves healthy. On carrying down a free incision from ensiform cartilage to crest of pubis, and then transversely dividing abdominal wall on

each side, immediately below false ribs, the viscera were fully exposed *in situ*. Bladder was found enormously distended, and its colour of a dark, pinkish hue, evidently imparted by contents; introducing catheter, no fluid came away, notwithstanding the instrument could, as in life, be at once made to enter the organ; consequently, a puncture was made high up in lateral aspect of the organ, when a pint of clear urine was procured; another pint of fluid was thus taken away, but this consisted, in a great measure, of serum and blood; other four pints and a half of blood, partially in a state of fluidity, and partially in dark easily-broken coagula, were removed. Carefully introducing the hand, a soft, irregular, roughened surface was felt, extending over a considerable space at left side of bladder, chiefly towards neck and central part of that side. A small orifice, admitting the little finger, could be then felt, conducting to a cavity of sufficient size to admit a small orange. On slight pressure, two or three ounces of fluid blood flowed from the opening described. Turning the viscera aside, both ureters were brought into view. Left was tensely distended, and nearly as thick as the little finger; a small slit was made near its union with the kidney, and the contained fluid proved to be limpid urine; a gum-catheter was straightened, and so made, without any obstruction, to pass out at the urethral orifice in the bladder. Right ureter normal. The bladder was now removed, and on being freely laid open, extensive disease was manifest, which consisted of considerable thickening, at some places to the extent of seven or eight lines, and presented an ulcerated surface, but not covered with much purulent matter. On manipulation no very notable hardness was felt, yet the general appearance somewhat led to the supposition of malignant disease. The sacculated cavity spoken of was found to have a lining membrane analogous to the bladder when healthy. Prostate gland natural. Large arterial vessels lying in left aspect of pelvis unaffected. On careful examination of diseased mass, no bleeding orifices could be detected. Left kidney much smaller than the right. On being cut open, pelvis distended with clear urine; calyces and infundibula dilated; papillae ill-defined. Right kidney healthy. Other organs normal.

Clinical Illustrations of the Diseases of the Nervous System. By Dr. SEMPLE.

The first case related by Dr. Semple was that of a man who had never complained of any cerebral symptoms, and who indeed had enjoyed good health all his life, so far as was known. He died suddenly; and upon examination it was found that, besides

slight disease of the heart and aortic valves, there was a layer of adventitious membrane, seven inches long and two and a half broad, resembling in its consistence the buffy coat of the blood, and lying upon the left hemisphere of the brain, in the cavity existing between the two layers of the arachnoid membrane. The author considered that this adventitious growth probably resulted from a latent inflammation of the arachnoid membrane, giving rise to the exudation of lymph which subsequently became organized.

The *second* case was that of a girl, who, after being cured of an attack of peritonitis, was seized soon after with violent and incessant vomiting, together with excruciating pain in the abdomen, which, however, was not increased, but rather relieved on pressure. No remedies afforded her the slightest relief, and she died in great pain, but in the full possession of her intellectual faculties, two days after the commencement of her illness. On a post-mortem examination, no appearances were discovered in the chest or the abdomen which could in any way account for the symptoms during life, the rapid course of the disease, and its fatal termination—the only remarkable circumstance being that the right ovary was converted into a large sac containing pus, which, however, was not the result of the recent disease, for the sac was lined by a smooth membrane, had no communication with the abdominal cavity, and was unaccompanied by any marks of surrounding inflammation, and there was a large quantity of thin serous fluid beneath the arachnoid, within the ventricles, and in the theca vertebralis.

The *third* case was that of an old woman who during life exhibited all the symptoms of well-marked cerebral disease—the pupils were fixed, somewhat dilated; the tongue brown, dry, and cracked; the pulse weak and irregular; the limbs in a state of spasmodic rigidity. She uttered loud noises at first, and complained of great pain in the head; afterwards she became gradually insensible, but never fell into the state properly called coma. On a post-mortem examination, it was found that the brain and its membranes were quite healthy, there being no appearance of congestion, thickening of the membranes, or effusion. The only remarkable appearance found in the body was granular disease of the kidney, and the urine was found, on testing it, to be albuminous, and when examined by the microscope to present the tubular casts which are frequent in such cases. The symptoms in this case were therefore entirely due to the presence of urea in the blood.

The *fourth* case was that of a woman who had suffered from epilepsy for many

years, and who had been partially relieved by cupping, and by the long-continued application of blisters to the nape of the neck. She was also placed carefully upon low diet, and saline purgatives were frequently administered. The post-mortem examination exhibited a remarkable and extensive thickening of the cranial bones—the internal table of the skull, instead of presenting its usual thin and brittle structure, being thick and solid; and the cranium itself, being, by measurement, half an inch thick in various places. All the prominent bony processes, as the crista galli, the clinoid processes, the ridges of the petrous portion of the temporal bones, were much increased in thickness and asperity. The brain was flattened anteriorly, the depression exactly corresponding to the thickening of the skull.

The *fifth* case was one of an old person, of a leucophlegmatic appearance, who had generally enjoyed tolerably good health, but who, without any marked previous symptoms, fell into a comatose condition, and died. On a post-mortem examination, it was found that there existed a multitude of hydatids, of the variety called *cysticercus celulosus*, lying beneath the arachnoid membrane and in the ventricles. These hydatids had been examined and dissected by Dr. Sharpey, and some of them were exhibited to the Society.

The *sixth* case, which terminated favourably, was considered by the author as one of local congestion of the brain, affecting the origin of the fifth pair of nerves on the right side. It occurred in a woman aged fifty-four, and was characterized, at first, by a burning, shooting, throbbing pain in the right eye, together with pain in the forehead, face, and right ear. In the progress of the case, which was at first considered one of neuralgia, a variety of anomalous symptoms succeeded: there was spasmodic closure of the right eyelid; the surface of the eye was excessively tender, and the pupil was oval; the general health became deranged; she had a sour taste in the mouth, no appetite, and occasional vomiting; urine scanty and high-coloured; tongue covered with a thick white fur; pulse 84, regular. A variety of remedial means were tried, but without much relief, and she rapidly became much worse: she was seized with convulsions and foaming at the mouth, followed by a comatose condition; pulse 100, strong, and incompressible; pupil triangular. She was now bled to sixteen ounces. After a very unfavourable night, during which she was attacked with spasmodic rigidity of all the muscles, and tetanic closure of the lower jaw, attended with delirium, she became sensible towards morning, when she complained of

excessive pain over the eye. She had previously been placed under a course of mercury, and her mouth was now becoming tender. A solution of the extract of belladonna was freely applied to the surface of the right eye, and also over a blistered surface which had been formed over the right temple. Under this treatment the patient rapidly improved, the sensibility perfectly returned, the pain in the eye diminished, the power over the eyelid was gradually resumed, and the favourable crisis was marked by a decided tenderness of the gums, a copious evacuation of urine, and a discharge of a fetid evacuation. She recovered completely; and although the author had frequent opportunities of seeing this patient for many years afterwards, she had no return of the complaint.

In conclusion, Dr. Semple alluded to the uncertainty and contradictory nature of the symptoms of cerebral disease, and showed that many conditions of the nervous system were produced by causes wholly distinct from one another, though producing the same result. He regarded pathology as the only true basis for the classification of the diseases of the nervous system. He insisted most strongly upon the necessity of accurate post-mortem examinations in all cases of cerebral disease; and indeed he considered, that whatever might be the supposed cause of a patient's death, *no post-mortem inspection could be deemed satisfactory which did not include an examination of the encephalon.* Upon the treatment he refrained, for the present, from offering any detailed observations, but condemned in strong terms the indiscriminate use of the lancet in all cases of cerebral disease attended with insensibility or with perversion of the intellectual powers. The copious abstraction of blood, in appropriate cases, was the sheet-anchor of our treatment; but, when employed injudiciously, it was the source of irreparable mischief.

ACADEMY OF MEDICINE, PARIS.

March 20, 1850.

PRESIDENT, M. BRICHETRAU.

M. REBOULLEAU, of Constantine, in Algeria, transmitted a note in which he traced the cause of death in new-born infants to deficient alimentation, and to the want of a due relation between their food and the degree of development of their organs of digestion.

M. DELOUX, professor in the naval school of Rochefort, submitted remarks on the febrifuge properties of chloroform, which he stated that he had successfully ad-

ministered in cases of ague that had withstood quinine, &c.

M. POISEVILLE, in reference to the statements of Dr. Pravas, made at the last meeting of the Academy, with regard to the influence of atmospheric pressure on the capillary circulation, observed that he had instituted a series of experiments on animals which proved that increased pressure of the atmosphere on the surface of the body in no way influences the rapidity of the circulation.

M. BOUCHARDAT read an essay on the presence of sugar in the liver in diabetes, and on the action of purgatives in that disease.

SURGICAL SOCIETY OF PARIS.

March 27, 1850.

PRESIDENT, M. DEGUISE, *père*.

Ought the Operation for Hare-lip to be had recourse to immediately after birth?

A LONG discussion took place on the propriety of having recourse to the operation for hare-lip at an early period after birth.

M. P. DUBOIS observed that this measure had been had recourse to almost exclusively in cases of simple hare-lip, but that the operation was equally available in complicated cases. MM. Robert, Danyau, Chassaignac, Guersant, Maisonneuve, Lenoir, and Demarquay, took part in the discussion.

The general conclusion was in favour of the early adoption of the operation, as being for the benefit of both mother and infant.

Enormous Urinary Calculus removed by the lateral operation.

M. LENOIR presented a calculus measuring from twenty-one to twenty-two lines in diameter, which he had removed from the bladder of a man sixty-eight years of age. The form of this stone was that of a flattened oval, twenty-seven lines in its longest diameter. Its weight was twenty-six drachms six grains. Its composition was uric acid.

ACADEMY OF SCIENCES, PARIS.

March 25, 1850.

PRESIDENT, M. PUILLET.

The existence of Iodine in Freshwater Plants.

M. CHATIN, Professor in the School of Pharmacy, read an essay in which he stated that he had determined the existence of

iodine in fresh water plants, especially in the cresses, to which circumstance the author attributed the therapeutic action of this last class of plants.

M. Chatin remarked that plants which grow in running streams, or in waters agitated by the wind, contain more iodine than those in stagnant waters; and that the quantity of iodine contained in plants is in proportion to the extent of their immersion.

Hospital and Infirmary Reports.

KING'S COLLEGE HOSPITAL.

CASE I.—*Stone in the Bladder, with Stricture of the Urethra—Lithotomy, and Division of Stricture by an Operation.*

WILLIAM G., æt. 40, living in the country, was admitted into King's College Hospital, under Mr. Fergusson's care, January 8th, 1850, with stricture of the urethra and abscess of the perinæum. The following is the previous history of the patient:—About sixteen years ago he contracted a gonorrhœa, which, in consequence of a dislike to mention it to any one, he neglected for twelve months, during which period it remained upon him, until he accidentally mentioned it to a surgeon, who prescribed something for him, upon taking which the disease yielded. Subsequently, however, he suffered with difficulty in making water, and it was discovered that he had a stricture of the urethra, for which a catheter was passed; but the affection was never cured, inasmuch as it did not give him any trouble beyond that occasioned by some difficulty in passing his water. Every few months a catheter was passed for him by a surgeon in the country. He remained without much suffering until the summer of last year, when all his symptoms increased somewhat suddenly: the stream of urine became much diminished in size, and the passing it was attended with considerable pain; there was also a copious slimy white deposit in the chamber-pot, and it sometimes happened that the water suddenly stopped whilst he was in the act of urinating. He applied to a surgeon, who used the catheter, but its introduction was always attended with pain and difficulty, and no larger one than a No. 4 could be passed through the stricture. Soon afterwards he had an abscess in the perinæum, which was opened, and which discharged, according to his own account, about a pint of stinking matter. As the stricture remained very obstinate, and he suffered much, he was sent up to Mr. Fergusson, for the sake

of having the stricture cured, as it was thought at this time that this was the only affection he was labouring under.

On his admission it was discovered that there were two irritable and obstinate strictures,—one seated about four inches from the orifice, the other at the bulb of the urethra. Besides this, there was a large, hard, and prominent swelling in the perinæum, in which, however, no distinct fluctuation could be detected. Mr. Fergusson was able, after some trouble, to pass a small instrument into the bladder; and on his second or third visit he discovered the existence of a calculus in the bladder, which had not been suspected before. Mr. Fergusson at first determined to dilate the strictures, and then perform the operation for stone afterwards, but as the patient was extremely anxious to be freed from his sufferings at once, and as the stricture near the bladder was extremely irritable and unyielding, he made up his mind to remove the stone and divide the stricture by means of one operation alone.

February 2d.—The patient having been placed under the influence of chloroform, was tied up in the position for lithotomy, and a small grooved staff was introduced with some difficulty through the contracted urethra into the bladder. Mr. Fergusson then, with a sharp-pointed knife, cut through the centre of the swelling in the perinæum, which contained some matter, down upon the groove of the staff, in front of the bulb, and divided in this manner the entire of the posterior stricture: having effected this, a double-edged knife, with a beaked extremity, was introduced through the wound into the groove of the staff, and run along into the bladder: the parts were then well dilated by the finger, and the forceps introduced, by means of which a soft calculus, about the size of a chestnut, was seized, and with this instrument and the scoop its fragments were removed from the bladder. It was found necessary to use the scoop, as the calculus, being chiefly composed of phosphates, and being very soft, was partly crushed by the forceps, and broke into pieces. There was a considerable amount of hæmorrhage during the operation, which was of necessity much more protracted than the ordinary operation of lithotomy.

In the middle of the night, after the operation, the patient was seized with retention of urine, and the house-surgeon was obliged to use the catheter, by means of which he drew off a large quantity of water mixed with a clot of blood, which probably caused the attack of retention.

3d.—Doing pretty well, although suffering considerable disturbance from the effects of the operation: he has had no

further attack of retention.—To take a grain of morphia at bed-time.

4th.—Has passed a pretty comfortable night; has had no vomiting, nor does he complain of any tenderness of the abdomen when it is pressed: pulse 110; tongue furred and dry; spirits good.—To have beef-tea, and repeat the morphia at night.

5th.—Doing well; urine coming freely away by the wound; tongue less furred; pulse quieter; countenance cheerful; no vomiting; no abdominal tenderness.—To continue his morphia, and to have a dose of castor oil in the morning.

6th.—Most of the urine comes away by the wound, some coming by the urethra; the tongue is somewhat dry in the centre; bowels have been well opened; pulse 98; skin cool; countenance cheerful.—To take beef-tea, and some light pudding.

8th.—This patient is progressing very well, the wound is looking very well, and permits most of the urine to flow through it; tongue only slightly furred; pulse 92; skin cool; bowels open.—Takes some wine and fish for his dinner now.

10th.—He has been troubled with diarrhoea since the last report, but this has been checked by an opiate enema; the wound is granulating well; the urine is now coming away by the urethra; tongue clean; appetite good; pulse 92.

12th.—Mr. Fergusson attempted to pass a catheter into the bladder to-day, but he found considerable difficulty in doing so, as the first stricture is still obstinate: the patient is doing admirably well in every respect, and the wound is healing up, and he takes meat diet.

19th.—This patient has almost entirely recovered from the operation; the wound has almost entirely healed up, and nearly the whole of the urine comes away by the urethra. Mr. Fergusson attempted to-day to pass a No. 6 catheter through the urethra into the bladder, but it was stopped by the first stricture, which is still very irritable and resisting: the point of the catheter was allowed to remain in it.

21st.—The stricture is still troublesome; he experienced a severe rigor after the passage of the instrument on the 19th. He feels very well now, and when he last passed water the whole of it came by the urethra.

March 2d.—The patient is now up and well from the operation which was performed upon him, but he is still undergoing treatment for the stricture, which now allows the passage of a No. 6 catheter, and the urine is passed with much greater facility. As, however, he is very anxious to go home, he is allowed to be dismissed in a few days, with the caution given to

him to have a catheter passed occasionally by the surgeon where he resides.

This case presented some features of more than ordinary interest, inasmuch as, in the first place, the patient was freed from two very severe maladies by means of one operation. An inveterate and almost insurmountable stricture of the urethra was destroyed at the same time that a calculus was removed from the bladder. Each of these operations—division of stricture by the knife, and cutting into the bladder to remove a stone from that viscus—are sufficiently formidable in themselves; and it cannot be denied that when the two operations are combined together there is more danger, inasmuch as a greater extent of the urethra than is necessary in the ordinary operation of lithotomy is divided. Still, this patient, who was a most irritable subject for any operation, made a rapid recovery from the severe process he had undergone. In instances of this nature, when a calculus in the bladder exists at the same time with a stricture of the urethra, it is the usual plan to dilate the stricture first, so as to get a free passage for the sound, and then to perform the necessary operation for the stone; but as the patient suffered most intensely whenever dilatation of the stricture was attempted, and as he was extremely anxious to have an operation performed immediately, Mr. Fergusson deemed it a fit opportunity to remove both affections at once. In a case of a somewhat similar nature which was in the hospital some months ago, a different course was adopted: the stricture was first dilated, and afterwards the patient was cut for stone in the ordinary manner, and with great success. But in this case there was but little irritability of the urethra, the stricture readily dilated, and the patient altogether suffered comparatively little: but in the case just narrated the stricture was obstinate and undilatable, the urethra was excessively irritable, the patient suffered at times most intensely, and was constantly importuning the surgeon to operate upon him at once.

Another feature of interest in this case was the fact of his having been sent to Mr. Fergusson to undergo treatment for stricture alone. A stone in the bladder was not discovered until after he had been some days in the hospital. Although he had been frequently under the notice of a surgeon in the country, and had had instruments frequently passed into the bladder, the cause of this was that the severity of the symptoms produced by the bad condition of the urethra had masked those which are the ordinary and frequently less severe concomitants of stone in the bladder: and

this case shows the necessity of carefully examining the bladder, even where a stricture is known to exist, and considered to be the cause of more than commonly severe symptoms.

Case II.—Stone in the bladder—Lithotripsy unsuccessfully performed—Subsequently lithotomy by the lateral method—Death from peritonitis.

On Saturday, March 9th, Mr. Fergusson performed the lateral operation of lithotomy on a man aged upwards of sixty. This patient had been under the care of Mr. Fergusson for several months, undergoing treatment for stone. When he was first placed under his care, it was deemed a proper case for lithotripsy, and accordingly Mr. Fergusson used the lithotrite several times, and brought away a great many fragments of stone; but he was unable to remove the whole: these several operations were performed under the influence of chloroform, and the patient suffered but very little from the various proceedings. Under these circumstances the patient was admitted into King's College Hospital, for the purpose of having the stone effectually removed by the operation of lithotomy.

A day or two after admission, Mr. Fergusson attempted to pass a sound into the bladder, to ascertain the size and position of the stone, but there was such an amount of spasm and irritability of the urethra, that it was only with considerable difficulty that the instrument could be passed, and the patient experienced so much pain that no satisfactory exploration could be made. On the next occasion, therefore, Mr. Fergusson gave the patient chloroform, and it was remarkable to witness the great facility with which the sound could be introduced, and how easily the calculi were touched, although they were not very readily found, as they were situated apparently in a kind of nest behind the prostate, which was somewhat enlarged.

The operation by the lateral method was performed: a free incision being made through the skin and tissues beneath, the bladder was rapidly cut into. Mr. Fergusson then introduced the forceps, and with a kind of twisting and dipping of the blades, he seized the calculi, ten in number, from behind the prostate immediately, and readily brought them away. The calculi varied in size from that of a bean to that of a pea; they were somewhat triangular, with smooth surfaces, and evidently had been originally fragments broken off from the original calculus, but had become smooth, and increased in size by fresh deposit.

On the following day symptoms of peritonitis, pain in the belly, and tympanitis,

set in: these increased, notwithstanding treatment, and the patient sank on Monday at 4 P.M., fifty hours after the operation.

On a post-mortem examination, the intestines were found to be slightly glued together by recent lymph. There was no extravasation of urine. The bladder and urethra were taken out for dissection, and on Thursday Mr. Fergusson laid the parts before the pupils, and made some clinical remarks on the case.

The incisions were found to be in the usual position, the urethra having been opened about half an inch in front of the prostate gland, in which only a very limited incision had been made. On looking into the interior of the bladder, the middle lobe of the prostate was discovered, as was considered to be during life, considerably enlarged, and protruding so prominently that a kind of depression was left behind it, in which the calculi had in all probability lay before the operation, and from which Mr. Fergusson had removed them: this enlarged portion was thinly encrusted with a phosphatic deposit; but there was not the least fragment of a calculus left. The bladder itself was contracted, its coats thickened, and the mucous membrane soft and congested, indicating a considerable amount of chronic irritation.

In the course of his remarks Mr. Fergusson stated that this was unfortunately one of those cases which furnished an instance of the truth, that every now and then, under whatever circumstances, a patient would die after the operation of lithotomy: it, moreover, forcibly showed how impossible it was to give an opinion beforehand as to how an operation of this formidable kind would turn out, and what an amount of anxiety and responsibility the surgeon takes upon himself. It often happened that a fatal result took place in cases where they would least expect it, and where everything appeared to be favourable to success,—when there was no difficulty in the operation, and it was done with ease and rapidity. And on the other hand, when, from some circumstances occurring in connexion with the operation, a fatal result might with reason be expected, a rapid and satisfactory recovery would take place. So uncertain and impossible to determine beforehand are the results of lithotomy. The average of deaths after the operation differ in some countries: it is one in three or four; and some surgeons have been known to cut 80 or 40 patients without more than one death. The general average, however, he believed, was about one in seven; and he considered that the surgeon who does not lose more than one patient in seven, after lithotomy, should consider himself as a successful man.

In the instance under their notice there were some features of interest. The patient had undergone lithotomy several times, and a great deal of the stone was brought away; but he found that it was impossible to get rid of it entirely by this process; and the post-mortem examination revealed the cause of this difficulty: for they had seen that the middle lobe of the prostate was much enlarged and very prominent; the calculi, or rather the fragments which had been broken, lay behind this, which acted as an impediment to their passage from the bladder to the urethra. Under these circumstances he was obliged to resort to lithotomy; and the patient had borne the process of lithotomy so well, and suffered so little afterwards, that he had every reason to hope that he would bear the ruder operation of lithotomy comparatively as well; but unfortunately he was disappointed; the patient had been carried off rapidly by an attack of peritonitis; there was no other cause for his death, and everything was right above the parts operated on; there was no extravasation of urine; the incisions were, as he usually recommended, free through the skin and perineum, but very limited in the neck of the bladder.

Medical Trials and Inquests.

GLOUCESTERSHIRE LENT ASSIZES.

April 2, 1830.

(Before Mr. Justice PATTERSON.)

ACTION AGAINST A BOARD OF GUARDIANS FOR RECOVERY OF CHARGES FOR EXTRA MEDICAL SERVICES.

Hyett v. Guardians of the Cheltenham Union.

MR. ALEXANDER, Q.C., Mr. Greaves, Q.C., and Mr. Brown, appeared for the plaintiff, and Mr. Cooke for the defendants.

This was an action by a medical gentleman at Cheltenham against the guardians of the Cheltenham Union, for attendances on, and medicines supplied to, paupers in their Union, at their request. The sum claimed was £50. The defendants pleaded the general issue. The plaintiff had sued the defendants in the Gloucestershire County Court; but as Mr. Francillon, the judge of that Court, was a magistrate of that county, and in that capacity was an *ex officio* guardian of the Union, though he never attended or took part in the proceedings of the Board, the defendants objected to the case being tried before him, and removed it into the superior Courts

by a writ of *certiorari*. It appeared that the plaintiff had been surgeon to the Union for nine years successively till March, 1849, when a Mr. Hewson was elected in opposition to him. This gentleman was, however, not properly qualified to hold the office, and a new election took place, at which a Mr. Cockle was elected. By the rules of the Poor-Law Commissioners, Mr. Cockle could not enter on his duties till he had been approved by them; and, until he should be so approved, the plaintiff was requested by the defendants to continue his services. He accordingly did so till the 20th of April, and the question in dispute was, how much he should be paid for what he did in the interval. He had been paid, while he was the regular officer of the Union, a salary of £80 a year, which included the supply of medicine, and about £100 a year more for extra services to out-door paupers, especially in midwifery cases. He claimed a guinea a day for the twenty-five days he attended the workhouse, as if he were engaged as an ordinary practitioner, without reference to the former scale of remuneration, and £8 more for medicine and for attendance on out-door paupers and in midwifery cases, according to the former scale, as if he were still their officer. They thought he was entitled to be paid only at the same rate as before, and therefore that the utmost he ought to claim was £5. 7s. 6d.; but in order to make sure that they offered him enough, they tendered him £20. The evidence to-day was that he was requested to continue his services till the appointment of Mr. Cockle should be confirmed; and, further, that he was a very efficient and faithful officer, and that the charges which he now sought to recover were very reasonable, and rather under than over the ordinary average. While the subject was under discussion before the board they sent a letter to the Poor-Law Commissioners stating all the facts, and asking for advice; and the Commissioners replied that they regretted that the board had engaged him without making a special contract with him, and feared that, if the case were to go before a jury, they would allow him a guinea a day.

When it was proposed to-day to put these documents in evidence for the plaintiff, Mr. Cooke objected that they were privileged communications. Mr. Alexander said no objection was made by the Poor Law Commissioners. Mr. Cooke replied that that made no difference.

Mr. Justice PATTERSON ruled that it would be most inconvenient if letters sent in confidence to a public body for their advice and instructions by another public body, who had a right to ask for their opinion,

should be made public, and, therefore, that they could not be read.

Mr. ALEXANDER then proposed to show that at a public meeting of the board of guardians the answer to the Commissioners was publicly read aloud, and a copy of it taken down by a shorthand writer, who was employed to report for a newspaper. On evidence to this effect being given, Mr. Justice Patteson ruled that as the guardians had made it public by their own act, it should be read.

On the close of the plaintiff's case, Mr. Cooke submitted that the plaintiff should be nonsuited, as the defendants were a corporation, and no contract in writing and under seal was proved. After a short discussion, in which several of the recent cases on the subject of suing corporate bodies on parole contracts were referred to,

His LORDSHIP said he would, if necessary, reserve the point for the opinion of the court above.

Mr. COOKE then addressed the jury, contending that, as the plaintiff had been engaged to continue his services as usual, he must be considered as having agreed to do so on the former terms, and that the jury could not come to the violent presumption that, when the defendants so engaged him to continue his services, they entered into an implied agreement to pay him, not as they paid him before, £80 a year, and £100 for extras, but a guinea a day, which would be upwards of £383 a year, and £100 for extras, which would be at the rate, not of £180, but nearly of £500 a year. They offered that which they, as guardians of the public purse, thought a fair and reasonable sum,—a sum far beyond the terms of the contract which they conceived they had entered into with him; but, if the jury thought he ought to get more, the defendants, so far as they were personally concerned, had no objection to his getting it, as they resisted the claim merely on principle.

His LORDSHIP, in summing up, said there was no person in the world who was worked so hard and paid so badly as a country surgeon; and that the question as to the amount to which the plaintiff was entitled was altogether for the jury.

Verdict for the plaintiff for the full amount claimed.

DISLOCATION OF THE ELBOW.

THE statement of the uniform occurrence of fracture of the condyles with this luxation was contradicted in two well-marked cases, traced from the time of reduction, shortly after the accident, to that of restored action in the joint.—*Notes of Hospital Cases, by Dr. Hartshorne, in American Journal of Med. Sciences, Jan. 1850.*

Correspondence.

DR. J. C. HALL, OF SHEFFIELD, AND
HOMŒOPATHY.

SIR,—In one of the series of papers illustrative of the pathology and treatment of some of the more important diseases, which, under the title of "Bed-side Sketches," I am now engaged to write for this journal, it became my duty to offer some remarks on the homœopathic delusion of the present day. A portion of this article was copied into a leading provincial journal, and has given rise to a reply, under the signature of "Sanatus." Perhaps the writer of this letter will permit me to direct his attention to an extract from a letter now before me. It is from the pen of Dr. C. J. B. Williams—a physician who has obtained an European reputation, and who is no less distinguished for his love of truth and Christian principles than for his scientific attainments. It is dated "7, Holles Street, Cavendish Square, Feb. 23d, 1850." He says—"Believing, as I firmly do, that the so-called 'homœopathic system' is an entire fallacy, and, therefore, calculated to do much injury to those on whom it is practised, I consider it to be my duty to do nothing that can directly or indirectly countenance or aid it." Dr. Williams brings to the examination of this question an anxious desire for truth (for it can be no consequence to him, to myself, or to any other physician, how we treat our patients, so that we get them well; and, if this system were the best calculated for this purpose, most gladly would I adopt it to-morrow); and, in searching for truth, Dr. C. J. B. Williams is guided by his extended experience, his intimate knowledge of diseases, and the best method of treating them; and the answer he has given to the question—What is homœopathy? is now recorded—"I firmly believe it is a fallacy calculated to do much injury to those on whom it is practised." After the opinion of such a man the question may be fairly considered as set at rest. Like him, myself and brother practitioners in this large and important town refuse to meet any homœopathic practitioner in consultation; resolved, as we are most fully, never to countenance this worse than folly.

I cannot, sir, help thinking that the good sense of mankind, which has already condemned the practices of the quacks of past ages, will, ere long, put an extinguisher on the knavish tricks of these gentlemen in our own times.—I am, sir,

Your obedient servant,

JOHN CHARLES HALL,

Surrey Street, Sheffield,
March 25, 1850.

Medical Intelligence.

LEGISLATIVE RESTRICTIONS ON THE SALE OF POISONS.—MEMORIAL OF THE PROFESSIONAL ASSOCIATION.

THE subjoined report of a Committee on the Sale of Poisons has been recently addressed as a Memorial to Sir George Grey.

The Committee appointed "to consider what restrictions should be placed upon the sale of arsenic and other poisons," have the honour to submit the following as their report to the Central Council of the Association:—

"That the result of the written answers to the queries submitted by Dr. Tunstall to the members of the Pharmaceutical Society, through the medium of their Journal, may be summed up as follows:—

1st.—"That the indiscriminate sale of arsenic and other poisonous drugs by retail in a careless manner is almost exclusively confined to those who sell drugs as an auxiliary to other little businesses, and who are ignorant of their doses, effects, and qualities; such as chandlers, grocers, hucksters, and general dealers, in thinly-peopled districts, and in some instances in the low neighbourhoods of populous towns.

2nd.—"That for very nearly all the ordinary purposes for which arsenic in small quantities is demanded, its use may be advantageously dispensed with by the employment of less destructive means, as far as human life is concerned.

3d.—"That the retail sale of opium, strychnine, white precipitate, corrosive sublimate, oxalic acid, &c., is a common practice in the shops above referred to, and that in some parts of the country 'ARSENIC SOLD HERE' is a common placard at the village shops during the period of wheat sowing.

4th.—"That many fatal mistakes occur from this indiscriminate sale, and the carelessness with which it is kept, and that many birds and other animals feed upon the wheat dressed with arsenic, and thus may occasion destruction to human life and health.

5th.—"That in conformity with the experiments of Sir Benjamin Brodie, the application of arsenical dressings to the abraded skin of animals has a tendency to destroy them, by the internal absorption of the mineral poison.

6th.—"That the retail sale of poisonous drugs should be entirely taken from the hands of the ignorant vendor, and confined to apothecaries and druggists only, and that the sale of poisons should be prohibited

by a legislative enactment to all persons who are ignorant of their use as medicines, or so controlled by registration or otherwise, that instant detection should follow the guilty use of them.

7th.—"That for agricultural purposes arsenic has found its way into general use in consequence of its cheapness when compared with other materials, and that it is considered by many that the sulphate of copper fulfils many of the uses for which arsenic is employed by the farmer.

8th.—"That its uncombined use should be confined exclusively to arts and manufactures, and that from the frequency of fatal mistakes it should not be sold to any farmer or other person without its being combined with some material easily recognizable by taste or appearance."

Your Committee appointed two of its members, Dr. Hodgkin and Dr. Sibson, to confer with the Committee appointed by the Council of the Pharmaceutical Society. After attentive consideration, and repeated conferences, the following resolutions have been adopted unanimously by the Joint Committee, as the basis upon which a legislative enactment should be framed:—

First.—That the sale of arsenic by retail should be restricted to chemists and druggists, and apothecaries.

Second.—Arsenic should only be sold to male adults known to the vendor, or to their written order.

Third.—The vendor should enter the sale in a book, with the date and the object for which it was required, to which the applicant and a witness, one or the other being known to the vendor, should sign their names, unless a written order is brought in a handwriting known to the vendor, which order should be pasted in a book.

JONATHAN TOOGOOD, M.D.

CHARLES HASTINGS, M.D., President.

THOMAS HODGKIN, M.D.

JAMES TUNSTALL, M.D.

JOHN HALE FUGE, F.R.C.S.E.

FRANCIS SIBSON, M.D., F.R.S.

NUMBER OF PATIENTS ADMITTED INTO ST. BARTHOLOMEW'S AND ST. THOMAS'S HOSPITALS DURING THE PAST YEAR.

	St. Barthol.	St. Thomas's.
In-patients cured and discharged	6146	4737
(Cholera 478)		
Out-patients	71564	59109
Deaths	630	801
(From cholera 198)		
Under cure:—		
In-patients	522	417
Out-patients	2340	3831

CRETINISM IN SWITZERLAND.

THE whole population of Switzerland is estimated at 2,188,000, *i. e.* but a little above that of this vast metropolis. In this number there are 20,000 persons who are more or less affected with cretinism, and of these no fewer than 8000 are idiots.

QUEEN'S COLLEGE, BIRMINGHAM.

THE local officers and finance committee of the British Association for the Advancement of Science, held last year at Birmingham, having determined to return to the subscribers to the local fund the whole of the funds in hand, which will amount to one-half of the subscriptions, the Earl of Dartmouth, the Earl of Harrowby, Viscount Lifford, the Hon. the Dean of Lichfield, Mr. James Taylor, Mr. J. E. Piercy, and other influential subscribers, have consented to transfer their moiety to complete the new buildings, museum, library, model room, engineering workshops, &c., of Queen's College, towards the erection of which, and the purchase of the freehold site, the Rev. Dr. Wernersford contributed the munificent sum of £8000.

QUESTIONS AT THE EXAMINATION FOR THE FELLOWSHIP OF THE COLLEGE OF SURGEONS.

THE first examination under the recent regulations, requiring a knowledge of classics and mathematics, took place on the 2d instant, when only one candidate presented himself. On the following Wednesday and Friday, the number of candidates presenting themselves for the professional examinations, including the above gentleman, amounted to twelve. The following questions in anatomy and physiology were proposed to the senior candidates, *viz.* :—

1. Describe the structure of the hip-joint, with the relative situation of the several muscles which surround it.
2. Describe the duodenum, its course, connections, and relative position, its bloodvessels and nerves, the peculiarities of its structure, its anatomical relation to the liver and pancreas, and that part of the process of digestion to which it is subservient.
3. Describe the urinary bladder of the male, its form, position, connections, and component tunics; also the male urethra, its course, dimensions, lining membrane, the parts surrounding it, and the openings into it.
4. Describe the peculiarities of the circulation through the brain, and especially the course and disposition of the principal trunks, venous and arterial.
5. Describe the diaphragm, its form, dis-

position, component parts, attachments, openings, and its actions in aid of respiration.

6. Describe the distribution of the third cerebral nerve, and of the first division of the fifth cerebral nerve, and the functions of these nerves.

The questions to the junior candidates were as follows :—

1. Describe minutely the structure of the mucous membrane lining the stomach and the intestines, its varied disposition, its texture, its constituent vessels, and its peculiar glands in the stomach, and in the several divisions of the intestinal canal.

2. Describe fully the changes which the food undergoes in the stomach and the small intestines; and describe, also, the process of absorption from the small intestines.

3. Describe the constituents of the blood—namely, the liquor sanguinis and the blood corpuscles, and the changes to which they are subject.

4. Describe the glandular structure of the kidney, the composition of the urine, and the purposes of this secretion in the animal economy.

5. Describe the nerves distributed to the globe of the eye and its appendages, and their functions.

6. Describe the structure of the cerebellum, and especially the disposition of its grey and white substance, and of the fibrous tracts which connect it to the cerebrum and medulla oblongata.

Answers to any four of the above questions, in each class, will be accepted as sufficient, provided that they are accurate and adequate.

THE SWINNY PRIZE GOBLET.

THIS elegant work of art is now on view at the rooms of the Society of Arts, in the Adelphi. It is thus described in the Catalogue :—"No. 146. *Silver cup*, designed by D. MacIise, R.A., modelled by W. F. Spencer, manufactured by R. and S. Garrard, for the Society of Arts, for the Swinny bequest. To be presented to Dr. Paris, and a duplicate of the same cup to J. S. M. Fonblanque, Esq., as authors of the best published treatise on medical jurisprudence. The cover is surmounted by a figure of Justice, with Vengeance and Mercy on either side: in the centre is a niello representing a hall of justice. On the foot are four kneeling slaves." We understand that these cups are to be presented to Dr. Paris and Mr. Fonblanque at the next anniversary meeting of the Society of Arts for the distribution of prizes, at which his Royal Highness Prince Albert will preside.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN IN LONDON AND ITS VICINITY.

THE Annual Dinner of the members and friends of this Society, to commemorate the 62d anniversary of its foundation, was held on Saturday, the 6th inst., at the Freemasons' Tavern; Sir CHARLES M. CLARKE, Bart., M.D., the President, in the chair.

After the usual loyal toasts, the Chairman proposed "Prosperity to the Institution." He dwelt impressively on the fact that this was no place for an appeal to the public for their assistance, since the persons whom he addressed were themselves the supporters of this Society. Were it otherwise, and had he to address, as he wished he had, the wealthy men of this wealthy city,—the men who know the value of time and of money, who live out of debt and within their incomes, and who have secured an elegant competence for their families,—then he was sure his appeal would be largely and liberally answered. But as it was, he need only say that this most excellent Society was founded by some of the greatest physicians and best of men for the benevolent purpose of enabling its members to secure for their widows and young children provision against want. How well this important purpose had been answered, those knew best who knew most about the Society. The printed report showed that there has been distributed in half-yearly grants since 1793 the sum of £39,578; that last year the sum so paid was £1408 to 37 widows and 16 children. As instances, and by no means rare ones, of the benefits secured by membership, he mentioned that one widow now on the list has received £1522, her husband having subscribed only £6 during his lifetime. Of the recent applicants, the husband of one had been a member only five years; of another, six years; of a third, eight years.

Dr. BURROWS returned thanks for the Royal College of Physicians, many members of which took a warm interest in the prosperity of this Society.

Mr. GRAINGER, after returning thanks for the Royal College of Surgeons, bore strong and feeling testimony to the exertions of the medical profession in the time of the cholera, and especially to those of the Union medical officers. He had means of knowing that many of these gentlemen were so repeatedly called up at night that they ceased to go to bed, or to take off their clothes, and this after a hard day's work. No one knew the amount of heroic endurance called forth in these men during the late epidemic.

Mr. EYLES, the Master of the Society of

Apothecaries, assured the meeting of the interest shown in this Institution by the Society over which he had the honour to preside.

On Mr. WARE's proposing the health of the president,

Sir CHARLES CLARKE feelingly expressed the gratification which he felt at presiding over this meeting, and the comfort and happiness which he derived in his retirement at having honestly borne his part, to the best of his ability, in the practice of a laborious but most honourable and useful profession, towards all the members of which he had uniformly felt that they were his friends and brethren.

Mr. STONE returned thanks for the Vice-Presidents. He was much gratified at having been elected to that office, and at meeting on this and other occasions with his professional brethren, and his respected and valued relation, the President.

Mr. WARE returned thanks for the Vice-Presidents. He had inherited from his father a cordial interest in the welfare of the Society.

Dr. WM. MERRIMAN returned thanks for the treasurers. He drew attention to the very small number of members, only 352, who composed this Society, compared with the immense number residing within the limits of Middlesex, and seven miles from the Post Office. He had remarked a complaint of the Poor Law medical officers, that they are not included in the proposed plan for annuities and pensions to all Government civil officers and their families. He strongly urged all such practitioners residing within its limits to become members of this Society. He mentioned that the Court of Directors have appointed a Committee to inquire into the income and expenditure. This Committee has received the very valuable assistance of Mr. Wm. Farr, under whose advice some important tables are being prepared, to show the statistics of the Society during the sixty-two years of its efficient operation. He read a list of donations, amongst which were particularly remarked that of H.R.H. the Duchess of Gloucester, £10, and also that of the Society of Apothecaries, being their 81st annual donation of fifteen guineas.

Sir JAMES EYRE returned thanks for the Directors, who, he could assure the meeting, spared no pains in carefully discharging the important duties entrusted to them.

Mr. LAW also took occasion, as a Director, to remark that only by a careful and well-advised management of the income, could their funds, large as they happily are, continue equal to future as well as present demands.

Dr. ALISON, Mr. CLARKE, and other gentlemen, returned thanks for the visitors, most of whom were proposed as members.

The Secretary, Mr. CHAS. R. WALSH, assured the meeting that neither the laws which regulated the granting of relief, nor the mode of administration by the Directors and officers, entailed any loss of self-respect on the widows or families of members who claimed its benefits.

A list of stewards was announced for next year. The dinner and arrangements, and especially the music, under the direction of Mr. Grattan Cooke, gave universal satisfaction; and the meeting was sustained with much cordiality till a late hour.

Donations were announced to the amount of £200.

THE CADMIUM AMALGAM AS A STOPPING FOR DECAYED TEETH.

IN our 43d volume (page 685) we inserted a communication from Mr. T. W. Evans, an American dentist practising in Paris, respecting a new amalgam for the teeth. This amalgam was chiefly composed of cadmium; and it was supposed by Mr. Evans, that among other advantages over the silver and tin amalgams, it would not blacken and discolour the tooth into which it was introduced.

He has recently addressed a letter to us, in which he candidly states that subsequent experience has not confirmed the favourable opinion which he entertained of this amalgam in his former communication. He has found that a yellow stain is slowly formed in the substance of the tooth, and he ascribes this to some mysterious galvanic influence. The fact, however, admits of a very simple chemical explanation. The sulphuret of cadmium is yellow, and the metal slowly combines with the sulphur in the animal matter of the tooth, so as to become a sulphuret on contact. We have heard from other dentists that this was an objection to the use of cadmium; and we believe that most practical men will agree in the view now taken by Mr. Evans, that there is no stopping so efficient as *gold*, where the tooth will bear the pressure necessary for the introduction of this metal. The use of all amalgams is objectionable, but it is sometimes unavoidable.

THE "TIMES" ON THE ASSISTANT-SURGEONS OF THE NAVY AND THE RECENT DEBATE IN THE HOUSE OF COMMONS.

CERTAINLY it was an edifying spectacle to see Admiral DUNDAS and Captain BERKELEY—gentlemen living, as Colonel SIBTHORP expressed it, "on a comfortable salary, with coals and candles, in a house rent-free, and in a dry and airy situation," come down to their places to denounce the

presumption of poor graduates in medicine humbly praying for something more than eighteen inches of hammock-room amongst boys, with the ship's company in front of them. Captain BERKELEY's indignation at such audacity knew no bounds. As a guardian of the public interests he declared the attempt to be "one of the greatest blows that could be inflicted on the nava-service of the country;" while, as an advocate of the officers themselves, he asserted that the freedom of the wardroom would inevitably lead them into inextinguishable debt, place them over the heads of their superiors, and be opposed, after all, to the general wishes of their own class. We are sure that the gallant member's impressions on these points will be better corrected by a little recollection on his own part than by any suggestions of ours. He must necessarily be aware that the assistant-surgeon has already more pay than two of the wardroom officers, and as much pay, on the average, as two others; so that all anxiety for the adequacy of his income to support wardroom mess charges may be dismissed as groundless. The "superiors" alluded to can be no other than mates, but as they are only ranked with lieutenants in the army by an order of 1844, whereas assistant-surgeons have enjoyed that rank for nearly half a century, it is difficult to see how the alleged "superiority" of position can be substantiated. No person denies the equality of midshipmen in respect of birth or education,—the difference, as Captain BERKELEY will remember, was in respect of *age*—midshipmen and mates *quitting* the junior berth about twenty-one, whereas assistant-surgeons of that age were just entering it. We have no desire to fight over again a battle so well won, but there is one point on which our information is perhaps more accurate than that of the Admiralty authorities, and we can assure them that if they have been led to believe in any disinclination or indifference on the part of the assistant-surgeons to the proposed reform they have been seriously deceived. We can state, on unquestionable grounds, that the earnestness and unanimity of the petitioners and the profession generally is something extraordinary.

OBITUARY.

DR. PROUT, F.R.S.

IT is with regret that we have this week to announce the death of this distinguished physician and pathological chemist. This event took place at his house in Sackville Street, on the 9th inst. Dr. Prout's researches in organic chemistry gained for him at an early period a high reputation: they were carried on at a time when but little attention had been given to this im-

portant branch of science, and when even an apparatus for obtaining accurate results was a great desideratum among chemists. Although these researches have been in great part eclipsed by the more showy and brilliant results of the German school of chemists, it is our belief that practical medicine has been greatly benefited by them. The researches of Dr. Prout on the pathological conditions of the urine, and on renal diseases, deservedly gained for him an European reputation; and his great work on this subject has become a standard authority to practitioners. The deceased occupied the foremost rank in this country as a physiological and pathological chemist. At the time of his death he was in the sixty-fourth year of his age. He was a Graduate of the University of Edinburgh, a Fellow of the Royal College of Physicians, and a Fellow of the Royal Society.

LAURENCE HOLKER POTTS, ESQ. M.D.

On the 23d ult., in Buckingham Street, Adelphi, Laurence Holker Potts, Esq., M.D., aged 60.

BOOKS & PERIODICALS RECEIVED FOR REVIEW.

Pathological Researches on Death from Suffocation and on Syncope. By S. Wright, M.D. LL.D. &c.

The General Malaria of London and the Peculiar Malaria of Fimico investigated, &c. By Andrew Ure, M.D. F.R.S.

Mesmerism tried by the Touchstone of Truth, &c. By George Corfe, of Middlesex Hospital.

Ranking's Half-Yearly Abstract of the Medical Sciences. December 1849.

The Chrono-Thermalist. No. 2, April.

Observador Periódico de Ciencias Médicas y Naturales. No. 8. Barcelona.

Comptes Rendus. Nos. 11 and 12, 18th and 25th March.

Journal de Chimie Médicale. Avril 1850.

The Edinburgh Medical and Surgical Journal. April 1850.

Revelations of Egyptian Mysteries. History of the Creation, &c. By Robert Howard, Practitioner of Medicine.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.26

Thermometer* 49.6

Self-registering do. Max. 60.0 Min. 29.7

* From 12 observations daily. * Sun.

RAIN, in inches, 0.2.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was about the mean of the month.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, April 6.

BIRTHS.	DEATHS.
Males.... 697	Males.... 540
Females.. 646	Females.. 664
1343	1124

CAUSES OF DEATH.

ALL CAUSES	1124
SPECIAL CAUSES	1232
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	126
Sporadic Diseases, viz.—	
1. Dropsy, Cancer, &c.	84
2. Brain, Spinal Marrow, Nerves, and Senses	186
4. Heart and Bloodvessels.....	162
5. Lungs and organs of Respiration ..	37
6. Stomach, Liver, &c.	62
7. Diseases of the Kidneys, &c.	11
8. Childbirth, Diseases of Uterus, &c. ..	9
9. Rheumatism, Diseases of Bones, Joints, &c.	11
10. Skin.....	2
11. Old Age.....	62
12. Sudden Deaths.....	17
13. Violence, Privation, Cold, &c.....	35

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	4	Convulsions.....	42
Measles.....	16	Bronchitis.....	119
Scarlatina.....	17	Pneumonia.....	86
Whooping-cough.....	27	Phthisis.....	134
Diarrhoea.....	15	Lungs.....	13
Cholera.....	2	Teething.....	9
Typhus.....	34	Stomach.....	3
Dropsy.....	26	Liver.....	12
Hydrocephalus.....	31	Childbirth.....	6
Apoplexy.....	28	Uterus.....	2
Paralysis.....	23		

REMARKS.—The total number of deaths was 206 above the mortality of the fourteenth week of the previous year. The real excess corrected for increase of population was, however, not more than 123, and this was in great part due to a large influx of convalescent cases. One case of decided Asiatic Cholera, fatal in sixteen hours, occurred on the 31st of March, in the district of St. Giles's in the Fields.

NOTICES TO CORRESPONDENTS.

We are obliged to Mr. E. C. Seaton for the invitation.

We lately received a short letter from Mr. Prentice on an Emmenagogue used by the Indians in South America. We regret that owing to an accident it has been mislaid. If our correspondent could furnish us with another copy of it, we shall have great pleasure in publishing it, as we believe the use of this plant as an emmenagogue and abortive is not generally known in this country.

The King's College Hospital Report has been received, and will have early insertion.

A very Old Subscriber.—Were we to adopt the plan suggested, we should be compelled to pay advertisement duty. It is with regret, therefore, that we cannot act on the advice of our correspondent, as the addition would be of great benefit to our readers. We cannot forget, however, that we live under a sovereign upon whose dominions the sun never sets, and in which the tax-gatherer never goes to sleep.

Dr. Soltau.—The continuation paper on Cholera has come to hand, and will be published as soon as possible.

D. R.—The letter is under consideration.

Dr. J. Pearson's communication on the treatment of Medical Officers during Cholera will be inserted.

Mr. J. Craig's paper has reached us.

Perceps.—We have no doubt from the description given by our correspondent that the article will be appropriate to our pages. No papers are rejected which convey practical information in any department of medical science.

The contributions of Mr. Swan, Mr. Smith, and Mr. O. Clark, next week.

RECEIVED.—Dr. Maryweather, Mr. Aikenhead, Professor Jamieson (Aberdeen).—Replies will be sent.

Lectures.

LECTURES

ON

LACTATION, AND THE DISORDERS
INCIDENT TO THE PUERPERAL
STATE.

By E. W. MURPHY, M.D.

Professor of Midwifery, &c. in University
College, London.

LECTURE XVII.

History of puerperal fever, continued—Dr. Ferguson's account of the fever of 1827-1828 to 1838—Dr. Copland's description of the fever of 1823 in the Queen Charlotte's Lying-in Hospital—His treatment of it—Views of Dance, Tonnellé, and the French authors—Dr. R. Lee's experience of puerperal fever between 1827 and 1832—Dr. Collins's account of the fever in the Dublin Lying-in Hospital, from 1826 to 1829—His prophylactic measures—Disappearance of the malady—Great diminution of mortality during the years 1830-31-32-33—Cause of the return of the fever in 1834—Its reappearance in 1835.

GENTLEMEN,—Dr. Gooch's interesting paper on peritoneal fevers met with an able expositor in Dr. Ferguson, who has published a most valuable essay on puerperal fever, that will aid us considerably in unravelling some of the knotty points of this entangled subject. He has fully confirmed the truth of Dr. Gooch's accurate observation, that this disease, so far as it can be recognised by its symptoms, or even by its post-mortem appearances, is by no means uniform. That if we consider the treatment of a disease the test of our accuracy as to its character, a fever will sometimes occur,—and it has been observed both by Drs. Gooch and Ferguson,—that presents many of the leading symptoms of that described by Gordon, Hey, and Armstrong, that produces precisely the same post-mortem appearances, and yet cannot be treated in the same way. Gooch met with an epidemic fever that was attended with diffused pain and tenderness of the abdomen, which became quite tympanitic; a rapid pulse, and laboured respiration, that was arrested only by Dover's powder and local fomentations. Dr. Ferguson describes the same:—"In the year 1827, and part of 1828, this form of malady was very frequent, and I had repeated opportunities of pointing it out to the pupils of the

General Lying-in Hospital, with whom it obtained the name of 'false peritonitis.'* Its epidemic character is shown from the fact that, "in the epidemic winter of 1827-28, this form was so prevalent along the banks of the Thames, that, being worn out with the incessant calls to visit the patients at their own houses, I directed the matron of the hospital to send, in the first instance, to all complaining of abdominal pain two doses of Dover's powder, each containing ten grains, one to be taken immediately, the other in four hours, when if, notwithstanding, the symptoms should persist, they were directed to send to me. After this I think I had no occasion to visit one in five of those afflicted, as they did not require any other treatment."† This obvious difference led Dr. Ferguson to examine more carefully the varieties that this disease exhibited, and he divides them into four classes—1st, the peritoneal form; 2d, the gastro-enteric; 3d, the nervous; and 4th, the complicated. He makes a more important step towards the elucidation of the subject in his attempt to show that all these varieties spring from one source and cause. Dr. Ferguson's views of causation are embodied in three propositions—1. The phenomena of puerperal fever originate in a vitiation of the fluids 2. The causes which are capable of vitiating the fluids are particularly rife after childbirth. 3. The various forms of puerperal fever depend on this one cause, and may readily be deduced from it. Dr. Ferguson has given the details of a large number of cases in support of his views, and also, in a tabular form, the leading particulars of 205 cases that came under his notice between the years 1827 and 1838. Of these 68 died, or one in three. The periods thus included, however, were not all epidemic years. In some the disease was sporadic, and therefore much milder in its character; while in others (especially 1838) it was exceedingly fatal. Dr. Ferguson observes—"The malady commenced in January, in which month Dr. Rigby saved only one out of nine. The hospital was closed for a month, and opened again in March, when he succeeded in rescuing only two in eight. Thinking that another mode of treatment might be more successful, I determined to bleed largely and to salivate. This plan was fairly tried under the constant attendance of Dr. Cape, and with my supervision, but three only in nine lived. Seeing that no treatment was of avail, the hospital was closed from May till November. I may add that the present year, 1838, has exercised an exceedingly fatal influence in

* Ferguson on Puerperal Fever, p. 11.

† Ibid, p. 16.

every species of fever, all of which were of the low or typhoid type.* This evidence, in addition to what we have already related, proves the pestilential character of puerperal fever,—a malignity that has baffled the most distinguished practitioners, even William Hunter himself.

Dr. Gooch found that, “in the winter of 1824, puerperal fever was prevalent and fatal in London and its neighbourhood. I had resigned my office at the Westminster Lying-in Hospital, and did not know, or do not remember, what was going on there.”† In his consultation practice, however, he soon discovered the impropriety of depletion and purging. Dr. Copland supplies the experience that Dr. Gooch required. He was appointed consulting physician to the Queen Charlotte’s Lying-in Hospital in 1823, and describes, in a letter to Dr. Ferguson, the disease that soon afterwards broke out there, and was scourging that, and I presume other metropolitan lying-in hospitals:—“The disease was most malignant, and often ran its fatal course within twenty-four hours from the first appearance of the symptoms. It was characterised by remarkable rapidity, softness, and weakness of the pulse; by great pain, distension, and tenderness diffused through the abdomen; by a clammy, offensive perspiration of the whole surface; by complete indifference to the child, to the result of the disease, and to everything else; by a moist, flabby, broad, mucous state of the tongue; and by relaxed bowels; the milk being secreted, and the lochia abundant, and sometimes offensive. On dissection, copious serous, or sero-albuminous, or an almost sanious effusion was found in the peritoneal cavity,—sometimes also in the pleural and pericardial cavities. The tissues were generally softened, and easily lacerated; but the uterus presented, in this form of the disease, no other lesion than more or less softening, as observed in the other abdominal organs, and even in the heart itself.”‡ The treatment ultimately adopted by Dr. Copland for this malady was boldly stimulant. “Immediately upon the appearance of the symptoms of the malady, a bolus containing from eight to sixteen grains of camphor, from ten to twenty grains of calomel, and from one to three of opium, was given, and repeated in four, five, or six hours. The dose of camphor was very rarely less, and but seldom above that named, and the interval between the two doses sometimes only three hours, but never longer than six. The dose of opium, in the second and

subsequent boluses, was regulated according to the effect of the first. Soon after the second bolus about half an ounce of spirits of turpentine, and an equal quantity of castor-oil, were given, on the surface of some aromatic water; and, if these did not operate fully on the bowels within three hours, the same medicines in double or triple quantities were administered in enemata. The bolus just mentioned was still continued at the same intervals, or after five or six hours from the exhibition of the second or the preceding one. Very soon afterwards, and generally subsequently to the administration of the turpentine draught and enema, a large piece of flannel folded several times, and sufficient thus to cover the whole abdomen, was directed to be wrung as dry as possible out of very hot water, to be instantly freely sprinkled with spirits of turpentine, and applied over the abdomen, to be closely covered by wash-leather, or a dry cloth, and to be kept thus applied for some time, or renewed, until erubescence of the surface of the abdomen was produced. The success of the above treatment in the malignant form I found to be almost complete, for *scarcely a case terminated fatally* in which it was early resorted to. During the two months I treated about thirty cases, and only two died, one of the two having refused to take medicine.* In the years 1826-7 Dr. Copland met with a different disease. “The cases which occurred were less malignant, and commenced very differently,—with less violence and malignity, more insidiously, and often in the uterus, and thence extending to the peritoneum.”† It seemed to be the fever described by Dr. Copland, in his valuable Dictionary of Medicine, as the “synchochoid puerperal fever,”—the link that connects the inflammatory and the malignant forms of this disease. The prominent symptoms of the synchochoid fever were sometimes those of metritis, and frequently metro-peritonitis, occasionally peritonitis alone, and very often uterine phlebitis.” With regard to treatment, Dr. Copland found that, “whether this form of the disease originate in the uterus or the uterine vessels, or in the uterine appendages, or in the peritoneum, as shown both here and in other places to be probably the case in many instances, or whether it proceed from a constitutional infection received through the avenue of the respiratory organs, the local affection or affections being secondary or contingent as contended for in respect of other instances, *there is certainly no remedy so efficacious as a decided and judicious use of*

* Ibid. p. 277.

† Gooch, p. 71.

‡ Ferguson, p. 234.

* Op. cit. p. 287.

† Op. cit. p. 288.

spirit of turpentine.* This remedy was first proposed by Dr. Brennan, of Dublin, had been treated with too much neglect, and has now found a warm and able advocate in Dr. Copland.

Thus far, in our history, we have spoken of puerperal fever as an essential disease, varying in its character and most destructive in its results. It was considered to be the primary source of the different morbid alterations in the tissues that post-mortem inspections revealed. We have now, however, to present a different view of this subject,—to consider the group of symptoms that constitute the disease as the effect, not the cause of the local derangement. We can no longer speak of them as “peritoneal fever,” but as fever symptomatic of peritonitis: we are to discard the term “typhoid or adynamic fever,” and look into the veins and absorbents for the inflammation that these asthenic symptoms indicate. Among the improvements in medical science nothing has been more remarkable than the rapid advance of pathology. The precision that it has given to our knowledge of disorders previously but obscurely guessed at, has tended to make pathology the basis of all medical reasoning upon the nature of diseases; and hence the physician, in his order of causation, does not proceed from symptoms to post-mortem appearances, but conversely looks among morbid lesions for the true interpretation of the symptoms. In this mode of reasoning it must, however, be borne in mind that, like statistics, the truth of the conclusion depends upon the perfect accuracy and completeness of the facts, and that the slightest error in the elements of the argument may lead to a conclusion very wide of the truth. The wandering of Broussais with regard to fever will sufficiently illustrate our meaning. Dance, Tonnellé, Duges, and we might say generally the French school, have viewed puerperal fever as being only symptomatic of a previous inflammation existing in the one or other of the uterine tissues. Tonnellé especially has taken great pains to point out from post-mortem inspections (he made 222 dissections) the comparative frequency of the different morbid lesions. He found the following results from his inquiries in the dead-room:—

Alterations of the uterus and appendages	197
Peritonitis	193
Combined lesions of uterus and peritoneum	165
Peritoneum alone affected	28
Uterus alone	29

* Copland's Dictionary of Practical Medicine, Part IV, vol. iii. p. 534.

He gives fuller and more accurate details of the several lesions, and from collective tables infers, “That the uterus is more frequently attacked than the peritoneum by a slight excess in relative numbers. 2. That these two lesions are mostly combined. 3. That each in turn may fail. 4. That in 222 cases pus was found in the vessels 134 times.” The term “puerperal fever” is therefore discarded, and all the varieties which this disease presents is attributed either to metritis or to peritonitis, metro-peritonitis or to uterine phlebitis. Dr. Robert Lee is an enthusiastic disciple of the French school. He thus relates his experience of puerperal fever between 1827 and 1832:—“From the 1st January, 1827, to the 1st October, 1832, one hundred and seventy-two cases of well-marked puerperal fever came under my immediate observation in private practice and in the British Lying-in Hospital, and other public institutions in the western districts of London. The symptoms and progress of these cases were watched with close attention. The effects of the different remedies employed were observed; and, where death took place, I carefully examined the alterations of structure in the uterine and other organs. Of 56 cases which proved fatal, the bodies of 45 were examined, and in all were found some morbid change decidedly the effect of inflammation, either in the peritoneal coat of the uterus or uterine appendages, in the muscular tissue, in the veins, or in the absorbents of the uterus, accounting in a most satisfactory manner for the constitutional disturbance observed during life. The peritoneum and uterine appendages were found inflamed in 32 cases; in 24 there was uterine phlebitis; in 10 there was inflammation and softening of the muscular tissue of the uterus; and in 4 the absorbents were filled with pus. These observations are therefore subversive of the general opinion now prevalent, that there is a specific, essential, or idiopathic fever which attacks puerperal women, and which may arise independent of any local affection in the uterine organs, and even prove fatal without leaving any perceptible change in the organisation of their different textures. As the constitutional symptoms thus appear to derive their origin from a local cause, it would certainly be more philosophical, and more consistent with the principles of nosological arrangement, to banish entirely from medical nomenclature the terms ‘puerperal or childbed fever,’ and to substitute that of uterine inflammation, or inflammation of the uterus and its appendages, in puerperal women. Puerperal peritonitis and peritoneal fever are terms not less objectionable than puerperal fever, for in many fatal cases there is no proof

whatever of the existence of any morbid affection of the peritoneum."* Dr. Lee consequently sets aside all such terms, and only describes "inflammation of the uterine system in puerperal women;" and, inasmuch as, "like inflammation of other organs of the body, that of the uterus varies greatly in severity in different cases," Dr. Lee varies his treatment accordingly. "At particular periods I have remarked a disposition to the disease in some puerperal women, evinced by tenderness of the uterus and acceleration of the pulse; but, where it has taken place in so slight a degree as to yield readily to the exhibition of opiates and the application of fomentations and cataplasms to the hypogastrium;† but in other cases, "when the symptoms of puerperal peritonitis manifest themselves as before described, in a violent form, twenty or twenty-four ounces of blood should be immediately taken from the arm by a large orifice, while the patient has the trunk and shoulders considerably elevated in bed. We should not be deterred from employing the lancet because the pulse is small and contracted, provided it does not exceed 110 or 115 pulsations in the minute. . . . The venesection should be followed, without loss of time, by the application of one, two, or three dozen of leeches to the hypogastrium, proportioning their number to the urgency of the symptoms. When the leeches have come off, the bleeding should be promoted by warm fomentations, or by a thin warm linseed-meal poultice applied to the hypogastrium. . . . At the same time eight or ten grains of calomel in combination with five grains of antimonial powder and gr. j. or gr. ij. of opium, or with ten grains of Dover's powder, should be administered, and this should be repeated every three or four hours until the symptoms begin to subside."‡ Dr. Lee has given upwards of fifty grains of calomel with decided benefit, and, out of 170 cases, in only two instances was the mouth severely affected. "After the second dose of calomel I have often exhibited with advantage a strong purgative enema or a cathartic draught of senna and salts, repeating it according to its effect. After the operation of the medicine, the pain of the uterus, which had only been relieved, has completely subsided."§ Dr. Lee places great confidence in mercury to relieve the congested and inflamed state of the peritoneum; and in those instances (as in the *Maternité*) where it had not succeeded, he attributes its failure to tardiness in its use. "In the epidemic which prevailed in the Mater-

nité, at Paris, in 1829, mercury was not employed until the last stage of the disease." Such is the outline of Dr. Lee's treatment of puerperal peritonitis, at the period alluded to. "With regard to the treatment of inflammation of the uterine appendages, and of the deeper-seated tissues of the uterus itself, whether of the absorbents, veins, or of the muscular structure, the symptoms from the commencement are generally those which contra-indicate the use of general blood-letting."* Dr. Lee equally objects to the use of mercury. "In several cases of uterine phlebitis I have employed this remedy to a great extent externally, and speedily brought the system under its influence; yet the progress of the symptoms was not arrested, and the patients died as others had done where the mercury had not been administered." In fact, Dr. Lee is at a loss to find any successful plan of treatment for these cases. "Where the local pain is severe, leeches and warm fomentations seem to be the most appropriate remedies; but, as far as my own observations extend, we are not at present in possession of any remedial means which effectually control those varieties of inflammation of the deeper-seated structures of the uterus which I have endeavoured to describe."† Dr. Lee has given, in a tabular form, the report of 100 cases of uterine inflammation in puerperal women, which occurred from March, 1827, to May, 1831. Of these cases forty died, or in the proportion of one in two and a half; but it is remarkable that fifteen of them occurred in the British Lying-in Hospital, and ten died—just two-thirds. It will be observed that Dr. Lee has found the practice of Gordon, Hey, and Armstrong, of considerable service in puerperal fever when the peritoneum was chiefly attacked by the disease; but at the same time he admits that there are exceptions even to this rule of treatment. "In no inflammatory affection of the internal organs are the good effects of blood-letting, general and local, more strikingly displayed than in puerperal peritonitis; but the results of my experience do not confirm the accuracy of the opinion that in *all* cases, by the employment of these means, we can always succeed in arresting the progress of the disease, which is always attended with the greatest danger, and not unfrequently runs its course to a fatal termination in spite of the most prompt and copious depletion, and the application of other remedies."*

Having given you in outline a history of this disease from 1746 to 1832, and pointed

* Lee's Diseases of Women, p. 34.

† Op. cit. p. 101.

‡ Op. cit. p. 103.

§ Page 104.

* Lee, p. 112.

† Ibid.

‡ Lee's Lectures, p. 564.

out the opinions and treatment of those who have given the most attention to this fatal malady, I shall conclude this part of our subject with some account of my own experience respecting it, as it occurred in the Dublin Lying-in Hospital, where its true characters could be best observed, and were least likely to be mistaken. The experience, however, of Dr. Collins must precede mine. Dr. Collins had been Master of that institution from 1826 to 1833, and during the first three of these seven years puerperal fever was rife. Eighty-eight patients were seized with the disease: thirty-two recovered, and fifty-six died. In his observations of this disorder, Dr. Collins soon found that "the extreme difference of opinion, and the very opposite measures recommended by practitioners, arises chiefly from their treating every variety of puerperal fever as one and the same disease; whereas there is, perhaps, not any other which exhibits a greater diversity of character in different situations, and even in the same situation at different periods. In some the fever is accompanied by symptoms indicative of the most active inflammation, such as forbid the least delay in the free use of venesection, and the decided employment of antiphlogistic measures. This form of disease, which is by far the most manageable, is generally met with in private practice. Puerperal fever, when epidemic in hospital, is directly the reverse; at least, in four epidemics which I have witnessed, the symptoms were usually of the lowest typhoid description, the pulse being so feeble and indistinct as to make you dread in many even the application of leeches; the patients in several instances of this form of disease exhibiting somewhat the appearance of those labouring under cholera."* In such cases as these, resembling the congestive disease of Armstrong, and the intense peritonitis of Dr. Mackintosh, Dr. Collins found depletion anything but a judicious practice. He observes—"When I was assistant-physician in 1823, puerperal fever raged to an alarming extent. The master of the hospital, at the commencement of the attack, was a strong advocate for the removal of blood *generally*. With his approbation it was resorted to with great frequency, and in the *promptest manner*. The effect on the patient and the mortality was such as to satisfy me fully of the inexpediency of adopting this line of treatment."† The years 1822 and 1823 were those in which the treatment of Armstrong prevailed in London, and the period when the controversy between Hamilton and Mackintosh

in Edinburgh raged in its highest fury. You will not, therefore, be surprised that they could not agree, and that the treatment by a bold depletion, which Mackintosh found to be so successful in *private practice*, Hamilton dare not adopt in his *hospital practice*. It is probable that the cases each had to treat were totally different. The treatment of Dr. Collins consisted in a dose of castor oil and turpentine, half an ounce of each, "when the attack seemed threatening. . . . In some cases, where the bowels had been tardy previous to the attack, we gave twice the quantity mentioned. Where the state of the patient was such as to encourage general bleeding, we used the lancet. I am satisfied, however, that in *hospital* the immediate application of three or four dozen leeches, followed by the warm bath, in which the patient should remain as long as her strength will bear it, will be found in the great majority the most judicious means of removing blood." This was followed by hot fomentations frequently repeated. "The frequent use of the bath, when thus managed, and the constant application of flannels (fomentations) as above mentioned, are of great utility." Dr. Collins then endeavoured to bring the patient as speedily as possible under the influence of mercury, but found that "to accomplish this in the low species of fever was *extremely difficult* in almost every instance, and in many impracticable, the system appearing to resist its effects in every form and quantity. In general I ordered four grains of calomel with as much ipecacuan powder to be given every second, third, or fourth hour. This combination I found, after the *most extensive trial*, to excite less uneasiness, and act with better effect and speed, than any other with which I am acquainted." When ipecacuan sickened, calomel and opium was substituted, but this was seldom necessary. "The ipecacuan, when it does not sicken, seems to have the best effect in preventing calomel exciting irritation in the bowels and producing moisture over the surface. The quantity of calomel and ipecacuan taken in this way in many instances was very great, to the amount of three, four, five hundred grains, or upwards. With some, in order to hasten its effects on the system, friction with strong mercurial ointment was diligently employed, and the blistered surfaces dressed with the same."* Dr. Collins sometimes gave scruple doses of calomel with no better effect than small doses, and found that even salivation by no means insured the recovery of the patient. He thus sums up the result of his experience:

* Collins's Practical Observations, p. 391.

† Op. cit. p. 392.

* Op. cit. p. 395.

—"The result of my observations upon the treatment of puerperal fever is, that general bleeding, except when there is a strong full pulse; and the symptoms are of a highly inflammatory character, is injurious. On the contrary, local depletion, by the application of three or four dozen leeches, followed by the warm bath and stuping, all of which should be repeated according to circumstances, as often as the strength will permit, seemed most beneficial. These means, together with the active employment of calomel conjoined with hippo (ipecacuan) or opium, aided by mercurial frictions, offer the best prospect of relief. Blistering the entire abdomen, after leeching had been pushed as far as it could be, was found serviceable. In some instances the debility from the very commencement was so excessive as to induce us to apply the blister at once, using calomel and stimulants at the same time."* The most important part, however, of Dr. Collins's treatment was prophylactic. He assumed it to be an endemic disease communicable by infection, and therefore put in force the most rigid measures to secure perfect cleanliness

in the wards of the hospital; each, in its turn, was kept empty for a fortnight, fumigated with chlorine, washed with lime, and the beds renewed before new patients were admitted: every suspicious case of fever or erysipelas was carefully excluded; and by this watchfulness, aided by a very efficient mode of ventilation, the disease diminished every year until it disappeared; and during the last four years, from 1829 to 1833, the hospital was quite free from it.

I had been appointed assistant-physician Nov. 1832, and therefore had the fullest opportunity of observing the strictness with which these sanitary measures were carried out. I can testify also to their effect in the success of Dr. Collins's practice. In the year 1833, the last year of Dr. Collins's superintendence, 2138 women were delivered in the Dublin Lying-in Hospital, and of these only 12 died,—being about one in 178 cases. To place this question in a clearer light, I shall place before you, in a statistical form, a review of the whole period of his Mastership, giving you the state of the hospital before his appointment, and when it expired:—

Year.	Women delivered.	Deaths.	Proportion 1 in	Year.	Women delivered.	Deaths.	Proportion 1 in
1826	2440	81	80	1830	2288	12	190 nearly.
1827	2550	33	87	1831	2176	12	181 "
1828	2856	43	66	1832	2242	12	187 "
1829	2141	34	63	1833	2138	12	178 "
	9987	191	52		8844	48	184 "

You will perceive that the highest number of deaths (81) happened in the year 1826, being in the proportion of one in thirty cases,—a mortality which, although severe, is still much less than that of Paris or Vienna. The total proportionate mortality during the four years that the puerperal fever lasted, was one in fifty-two cases; but in 1829 Dr. Collins carried out his sanitary measures: puerperal fever disappeared, and the number of deaths at once diminished to one in 190, 181, 187, 178, or, of the total number, one in 184 cases: thus proving that, if hospitals can be kept free from this pestilence, the mortality may be less than in out-door practice: it also shows the success of Dr. Collins's general treatment, which on more than one occasion has been too severely attacked.

In 1833 there was no puerperal fever in the Dublin Lying-in Hospital; but among the post-partum seizures of the patients three cases came under my notice, to which

I shall have again to refer: one was a case of peritonitis, another of erysipelas, and a third of low fever, with sero-purulent effusion into the peritoneum, and a putrid uterus. In 1834 the fever appeared in August, introduced in the following manner:—Typhus fever then prevailed in Dublin, and two women were unfortunately admitted, being in the first stage of the attack. As soon as it was possible to do so with safety, they were transferred to the proper fever hospital, but too late to save the lying-in hospital from contamination. A case occurred on the day after their admission, August 19, presenting symptoms of acute puerperal mania, which died in about four days. In this case the peritoneum was softened, and contained sero-purulent fluid, although no prominent symptoms of peritonitis showed themselves. This obscure case excited alarm, and with justice, for in ten days afterwards the fever burst out in its full force. A patient was seized with rigors, violent stitches through the sides, tympanitic distension of the abdomen, extreme pains in epigastrium,

* Op. cit. p. 396-7.

and general prostration: she died in thirty hours. The day after, the woman in the next bed exhibited symptoms of uterine phlebitis, with erysipelas of the vagina, extending over the right buttock. Another in the same ward had peritonitis, but the attack was milder, and she escaped. The pestilence then flew to a distant ward in another part of the building, and patient after patient was sacrificed. It now became general through the hospital, and all further admissions were prohibited. About 26 women were attacked, and of these 16 died. The fever continued more or less until November, when it disappeared for a time. The manner of its incursion, and the general characters of the disease, made a strong impression on my mind, and satisfied me that we had to deal with a malady of a very different character from any that had been before observed, or from the ordinary affections of parturient females. The hospital seemed to be approaching a condition to favour the production of an endemic disorder; patients did not recover quite so favourably; and in the beginning of the month of August, just before the attack, some women who had rather severe labours were seized with erysipelatous inflammation and extensive sloughing of the vagina. The last case, also, that occurred in November, was a case of diffuse inflammation. It seemed to me, therefore, that erysipelas was its companion, or rather its attendant: it was the harbinger of its approach, the last trace of its presence; and although the two diseases (if I am correct in dividing them) sometimes were found to coexist, yet when the fever was at its highest intensity erysipelas was absent. The first cases attacked were struck down at once; the first stage of the disease seems to merge immediately into the second; a rapid pulse (140 to 160); cold surface; livid expression; clean tongue, with a bluish hue in its centre; a perfect apathy or indifference, if not dislike to the child; a very slight tenderness of the abdomen, with or without tympanitis; a laboured respiration and great thirst, the only urgent symptoms. All these combined to characterize the highest intensity of the fever. Having seen a large number of cases of cholera in 1832, the resemblance between these cases and the collapsed stage of cholera was most remarkable. In one of these cases there was no sero-purulent effusion, nor any evidence of those morbid changes we attribute to peritonitis: there was simply venous congestion, giving the intestines a livid aspect, and distending the larger veins considerably. In another a dusky serum was effused, and the uterus so infiltrated that it was like a wet sponge: there was also considerable serous infiltra-

tion beneath the pelvic peritoneum, which, when cut into, was like a mass of soft jelly. In a third case there were the usual sero-purulent effusion in the peritoneum, pus in the uterine veins and absorbents, and yet during life no tenderness nor swelling of the abdomen.

In another class of cases, which were much the most numerous, all the symptoms of peritonitis were present. Generally on the second day after delivery, but sometimes within 24 hours, the patient was seized with severe rigor, followed or not by perspiration; the pulse varied from 120 to 140; the tongue was clean or covered with a creamy fur; the countenance collapsed rather than anxious, and exceedingly expressive of the malady; there was generally, but not always, vomiting. Tenderness commenced in the region of the uterus, which soon spread over the peritoneum; the abdomen became distended, and then the patient's sufferings in truth commenced: respiration was most painful; every effort to inspire was accompanied by shooting pains through the ribs, and was especially severe at the scrobiculus cordis; the skin became hot and dry; the patient lay on her back with the knees drawn up; the lochia were sometimes arrested, but often not so. This state would last perhaps twelve hours: when last stage supervened, the pulse beyond counting; the extremities cold; vomiting without effort; the pain of the abdomen gone; some slight wandering, and death. In another variety, the patient had also a severe rigor, but always followed by profuse perspiration: some pain in the region of the uterus generally preceded the rigor: this pain often changed its seat from the right to the left iliac region and back again; the abdomen was not at first engaged, but was soft and free from pain; there was usually vomiting and diarrhoea; motions green; the lochia was not arrested, but often very offensive. The countenance from the beginning had the usual collapsed expression, but more listless; the tongue was dry, brown, and furred; the patient wandered, and sometimes just as in typhus fever; she lay in a delirium, muttering to herself, but this seldom happened; the intellect was usually clear enough to answer questions; but when left alone the patient seemed quite unconscious. Sometimes an evidence of what was going on showed itself on the surface in a local inflammation. A diffused dusky redness of the buttock, or inside the thigh, or on the instep, appeared. One patient had paralysis of the right hand, which came on in the course of the night without any apparent cause: the hand swelled up, and about the wrist was the diffused redness. In these cases purulent deposits were occur-

sionally found at the back of the orbit. In the post-mortem inspections of the former class of cases the uterus was frequently unaffected, while the peritoneum contained sero-purulent effusion: in these, however, the uterine veins, and sometimes the absorbents, were filled with pus. In one case the sinuses were coated with a layer of pasty lymph, and so filled with pus that a section of the uterus was more like a phthisical lung than anything else, when it is studded over with small aggregated tubercles in a state of softening.

In a fourth class of cases that became more numerous towards the conclusion of the attack, the rigor occurred on the third or on the fourth day, and sometimes was absent; there were the same pains about the ribs and epigastrium; the same tension of the abdomen, but less in degree; respiration was easier; the agonizing pains were absent, but a general diffused tenderness of the abdomen remained; there was some vomiting; the lochia were not altered, and milk sometimes secreted; the pulse was usually 120, and more resisting than in the former cases; the countenance was not so collapsed, but more anxious. Altogether they seemed to be less under the influence of the disease, and were much more amenable to treatment. These cases generally recovered. In all instances, from the beginning to the end of the visitation, a peculiar odour was observable about the patients that was very characteristic: it was a faint acid, almost cadaverous smell, that attracted attention even before the leading symptoms presented themselves.

In consequence of the fatality of the disease in one ward (No. 11), it was closed altogether in Oct. 1834, and not reopened until January 1835. The very first case then admitted was seized with puerperal fever, and died in sixty hours: thus it again returned, and continued for some time in the beginning of 1835. Unfortunately I have lost the notes of these cases, and therefore can give you no accurate information about them. Speaking from recollection, the general appearances and character of the fever was very similar to the attack in the previous year. Patients were seized quite irrespective of their labour, the only difference being that unmarried women, those who had causes of mental dependency, or those that were submitted to any of the most trifling operations, were sure to be selected, while healthy women, who had no cause of anxiety, generally escaped, or were able to resist the attack. In some of the worst cases a most deceitful rally sometimes took place a few hours before death. One patient, with a rapid tremulous pulse, cold surface, and cadaverous countenance, suddenly burst out

into a profuse perspiration; her cheeks became suffused as in blushing; the pulse full and regular, but still beating at the former rate, 160, and easily compressed; no pain was felt anywhere, and a momentary gleam of hope lighted up her countenance: it soon, however, faded, she sunk into her former state, and died soon afterwards. The treatment of these cases was conducted on the same principle as that adopted by Dr. Collins. As to its effects in cases of the first class, I might say with Wm. Hunter, no matter what was done, they died. The second and third varieties were somewhat more within reach of treatment, and patients who had strong constitutions, and cheerful dispositions, recovered, while those of an opposite temperament sunk. The fourth class of patients were generally saved. The post-mortem appearances we shall have to allude to more particularly in another lecture. It is worthy of observation, also, that in the year 1835, when the fever was absent, erysipelas seems to have remained behind; cases of severe labour were more exposed to inflammation of this character: the patients generally recovered, although extensive sloughs of the vagina sometimes took place. The mortality of the hospital in the years 1834 and 1835 was nearly trebled.

Year.	Total cases delivered.	Deaths.	Proportion 1 in
1834	2025	34	60 nearly.
1835	1902	33	56 „

Since then epidemic attacks of puerperal fever have fallen under my notice in London, the symptoms of which were chiefly those of peritonitis; but the cases being scattered, it was more difficult to trace the cause of the attack, or to take a comprehensive view of the course of the disease.

INJURIES OF THE RIGHT LEG.

HAVING noticed that this limb was more frequently the seat of accidents than the left in the wards, I made the comparison accurately, at one time, of those in the house; and found that of sixteen simple and compound fractures and amputations of the leg or thigh, thirteen were in the right, and but three in the left limb. If a hypothesis were allowed, possibly the fact might be explained on the idea that it is, in this country, chiefly from recklessness and overhaste that accidents occur; the "best foot forward" suffering the worst injury.—*Notes of Hospital Cases, by Dr. Harishorne, in American Journal of Med. Sciences, Jan. 1850.*

Original Communications.**THE SPINAL CORD.**

BY JOSEPH SWAN.

THE spinal cord may vary in shape and thickness, for corresponding with the required motion and position of the head and trunk, and for preventing any injury to its delicate structure, and that of its nerves. For these purposes its size must be proportioned, either by its thinness or a more sudden termination in long nerves, to the degree of flexion required in the several regions of the body. The thickest part is placed where there is the least motion, the thinnest where there is a considerable degree, and a cauda equina where it is very great. Some slight modification in these respects may be allowed by a great capacity of the spinal canal. When the cervical portion is very thin, it allows a very free motion of the head and neck, the dorsal and lumbar being almost without motion, as in numerous birds. When the dorsal portion is thin it allows very considerable flexion of the spine; and when it is replaced high up by a cauda equina, as in the hedgehog, it allows the necessary flexion for bringing the hind parts forwards, and forming its rolled up condition. When the lumbar and sacral portions are thick, there is little motion in the loins, but accordingly as the thick end is placed high up, and forms a long cauda equina, a proportionate degree of flexion is allowed, and is well observed in man, whose principal means of bending forward are in the lower part of the lumbar region.

The spinal cord is of a peculiar form of structure for connecting it with the oblong medulla and brain, and forming centres for giving origin to the anterior and posterior bundles of nerves for the completion of their innate perceptive and motive faculties. The arrangements of the cineritious and medullary matter are nearly the same throughout the length of each quarter of the cord, except as to size, which is greatest at the place from which the largest and most numerous nerves arise.

The medullary matter is formed of meshes very similar to those of portions

of the brain, and appears in longitudinal fibres. The grey matter of each quarter radiates transversely towards the exterior, amongst the medullary matter and the roots of the nerves.

The roots of the nerves, just about their collection into fasciculi, appear on the surface of the spinal cord, and immediately underneath the pia mater, as a layer of coarser wavy threads; from this part they pass rather obliquely through the medullary matter towards the grey in finer wavy threads, which communicate very much with each other, and with the meshes of medullary matter, and the extension of these amongst the grey. Every wavy line is accompanied by an artery.

In the surface of the anterior quarter of the spinal cord in the deep furrow, threads from the coarser wavy roots pass horizontally with bloodvessels, and, in their course to the grey matter, communicate with fibres of the meshes which tend longitudinally towards the brain and cauda equina: these longitudinal fibres have some resemblance to nervous roots. The structure of the anterior quarter appears to be formed of finer roots, and more distinct longitudinal fibres than the posterior; the posterior appears in coarser roots in combination with longitudinal fibres formed of coarser meshes.

When the anterior quarter of the spinal cord is much larger than the posterior, and the nerves smaller, it must give a higher power, and by its extension on the surface in the deep furrow, allow a more exact mode of arrangement to the nervous roots for their distinct communication with the longitudinal tracts, and their disposal in the particular muscles to which they belong. Sensation is more mechanical than the will, and requires fewer representatives, and therefore has not so complex or large a structure; the actions of the muscles being infinitely more, necessarily depending on particular communications, require a wider range in the centres, and especially as their functions are more complicated.

The centres for the origins of the perceptive and motive nerves require only a small connection with the oblong medulla for conveying sensation and volition to and from the brain, as it may be very thin at this part in some birds. When it is of a nearly equal size with the oblong medulla, it is principally for

supplying larger nerves to a large or bulky neck, or powerful superior extremities, or for giving off a larger quantity in a small space, on account of the shortness of the whole cord; and therefore its size is only a contingency. It may vary in other regions, or be of the same thickness throughout to the tail, as in serpents. If it had been like the trunk of a cerebral or spinal nerve, all the fibrils originating from it would have existed at its superior part, and it would then have appeared larger according to its height in the spinal canal, and would not have varied so exactly in size in several regions for supplying a more or less extended chest, and larger or smaller extremities. It forms separate centres for the nerves. Large combinations, as of several of the muscles, do not take place in it, but through the plexuses and connections of the nerves, in concert with portions of the brain peculiarly arranged. When it is small in proportion to the convoluted portion of the brain, it probably conveys more exalted sensitive and voluntary impulses, but when larger in proportion to the same, allows a greater inherent perceptive and motive power, and a greater amount of physical energy. Although the perceptive power, as well as the motive, are inherent in the cord, sensation and volition are required to pass to them by appropriate tracts, by which they are placed under the influence and control of the sensory when the brain is perfect and the person awake.

In mammalia it may appear that fibres exist for connecting the centre, affording origin to each bundle of nerves with the sensory; in birds such an arrangement is very undefined, in many instances, especially on account of the small size of the upper portion of the cord; and in the snake, the cord being of the same small size throughout, the existence of a distinct fibre of communication for each bundle of nerves may seem very questionable; but as the will must command certain portions of muscle, and the sensory be impressed by each sentient spot, some very minute but distinct mode of connection must exist.

Great care has been generally taken for keeping the nerves of each faculty separate to their exit from the spinal canal, for the free and perfect transmission of sensation and volition to

and from their centres, the oblong medulla and sensory. This distinction may be presumed to exist for the centres of the nerves, or for the sensitive and motive tracts leading from them, or for allowing definite reflex or involuntary actions; nevertheless, just after the anterior bundle has joined the posterior beyond the ganglion, both become so interwoven as to make it impossible to separate them again, and yet sensation and volition pass independently. Nevertheless, it is most reasonable to conclude, that on account of the great delicacy of the structure of the centres, and the required separation of their faculties, great precision of conduct for the nerves would be required; and their arrangement certainly allows of the safe passage of the tender fibrils through the sheath of the dura mater, and especially of the change of the posterior fibrils in ganglia.

The will and the power of the cerebellum may be conducted through the tracts of longitudinal fibres of the spinal cord and nerves to the muscles, which are directed principally by their position, the cord and nerves furnishing the necessary nervous excitement, and a free communication. If the cord were of the same dimensions as far as the oblong medulla, it might be presumed that impulses from the centre of each nerve were conveyed by large tracts of fibres, but as it becomes so small in many instances, a very slender tract or fibre must be the compound representative of the segment from which the roots of each nerve proceed. The small size of the upper part of the cord in birds may appear sufficient, as much complexity is not necessary, for there are only a few varieties of action to be communicated which the position of the muscles cannot complete; and in those animals which have a very long cord, as the snake, there are very few changes of muscular action required; for although every rib, with the numerous muscles acting on it, is moved in succession, yet the will generally directs regions and muscles in combined action, but not singly, as when one is placed alone for a particular purpose.

It can hardly be presumed that the will, in its immaterial character only, and communicating with the cord by a general similarity of structure like the brain, can control all the nerves, or that any impulse may be thus conveyed from

or to the brain distinct for voluntary or sentient functions, but that there must be some particular mode of connection between the centres in the brain and the segments of the cord giving origin to the nerves. If such a power exist at all, it might be presumed upon in birds, in which the upper part is so small, and in the snake, in which there is so great a length and similarity almost throughout the cord, and especially as there are a very few more than similar ordinary impulses to be conveyed. It might be so even in other animals for all the voluntary acts of regions; the complicated movements of some parts, however, could not be well executed without some corresponding arrangement through particular tracts or fibres.

Disease in particular spots of the brain, by showing its effects on distinct parts of the body, determines that the mere agency of the will in the spinal cord through its spiritual influence cannot accomplish voluntary motions without direct tracts of communication. It is probable that the particular arrangement in the crossing fibres is necessary for this purpose, although, when the cervical portion is very small, it may not be satisfactorily displayed on account of the delicacy of the structure. The roots of every nerve being connected with particular fibres of the medullary matter, the impulse received by these may be conveyed to or from the brain; whilst the grey matter, by intermixing with them, imparts an exciting power and a capacity for receiving and modifying the impulses. When the grey matter is affected, as in sleep, the cord is not capable of receiving sensitive impulses, and is not preserved in a sufficiently active condition for allowing the influence of the will, provided the sensory is capable of transmitting it. It may be presumed that as nerves convey, the medullary fibres form the distinct communications between the several parts of the brain and spinal cord, whilst the grey matter which is the source of exciting power is able to convey only some general faculties, and these insensible and involuntary.

In health, the sensory, if not always present in, is in such communication with, every part of the cord, that the will can be instantly active from the centre of each motive nerve: it can also be exercised in receiving impulses from

the centres of each sentient nerve. Through these the several faculties of sense and motion are performed when the person is awake, and not fettered by deleterious agents. The will may be so modified in the several parts of the brain it particularly actuates, that a change in its spiritual agency may be made thereby, and then conveyed by the crossing or voluntary tracts; otherwise so complex a structure as the human brain could not be represented through the same voluntary crossing tracts of motive fibres. There may not, therefore, be a particular communication between the brain and each muscle separately, but only between it and sets of muscles for predetermined voluntary faculties: the slender communication of the crossing tracts with each segment of the cord giving off a nerve may suffice for this purpose, any other combination being effected through the nervous roots and the structure from which they originate, and the plexuses of the nerves and the muscles. The will has representatives of different muscular actions in the brain and cerebellum; and when the parts forming these are diseased, or the spinal cord or its nerves, a perfect impulse cannot be transmitted. The fibres through which the will can pass are sufficient for communicating all its purposes as they are required, without assuming its spiritual presence continually in the cord. The extension from the sensory in connection with the sentient portion of the cord, and ready to appreciate impulses and receive them as particular ones from each locality, may appear to be done through the general structure, from experience in beings born helpless, and whose powers are long in coming to maturity, but not in those born perfect. It is, however, probable that even then every segment of the cord has perfect conducting tracts to the brain for sensation as well as voluntary motion.

If the powers of the sensory can be present in the spinal cord, they may be also in the nerves, but probably in a less degree; they, according to the organs they supply, being modified by the cord to suit the powers, and especially of the larger and more complex brain of higher animals. The impulses of the olfactory and optic nerves do not go directly to the sensory, but are first modified according to the structure of the eminences at their origin, and all

the other nerves by the crura, the oblong medulla, and spinal cord. If so, the will and sensory only act by transmitting their powers through the centres in the cord, accordingly as they are done through the centres of cerebral nerves,—instantaneously, indeed, but not by being for this purpose always present in the cord or nerves.

As the grey matter forms a continuous column in each quarter of the cord, it probably has a similar faculty throughout, and is a source of power which is felt in all the parts the spinal nerves supply: as it radiates towards the circumference it gives excitement to every segment of the cord from which each nerve arises. As it has so large and remarkable a communication with the grey matter in another quarter, which is presumed to have a different faculty, and not near so much in those presumed to have the same faculty, it probably allows some similar actions to be propagated and conveyed from any segment of one quarter to the corresponding one of the same side; the radii which intermix with the roots of the nerves of each quarter probably converge in one, and diverge in the other on the same side sufficiently near the same spot in the grey column for allowing impulses to be received from the nerves of the posterior quarter, and conveyed to those of the anterior. The communication of the two halves of the cord through its thin transverse slip permits such a combination as just preserves a similarity of feeling. Although there is a continuous column from one end of the cord to the other, yet it can allow the conveyance of impulses in sleep, &c. from the nerves of any segment of one quarter only to the corresponding one of the other on the same side; but when it is much disordered or weakened, it may lose this circumscribed power, and be acted upon irregularly and generally from any irritated spot.

When the brain is held by sleep, the grey matter is principally affected, and the powers of sensation are very much diminished: the grey matter of the spinal cord is similarly influenced. Impulses, however, may be conveyed by both cerebral and spinal nerves, and be responded to even when the sensory is not able to appreciate and control them. In a similar manner motive nerves or parts may be excited when

the person is awake, by the condition of the grey matter from the state of the blood, without making any other sensible impulse on the sensory or the spinal cord, especially in respiration, after a division of the par vagum. Although the faculty of conveying impulses soon ceases on the destruction of the portion of cord giving origin to a particular nerve, it is by no means clear that the impulse must pass through the centres. The response depends on the sufficient irritability of the nerves and organs, whether in conjunction with centres or not, although the perfection of the centres undoubtedly contributes an abiding stimulus or power for allowing the nerves to act, and the impulses may be then clearer. In some instances the influence of the sensory is made apparent; for not only the muscles corresponding with the roots of the sentient nerves irritated are affected, but the whole limb; an endeavour is also made to remove the offending cause by another organ, as by the hand, although its nerves are not locally excited.

As the column of grey matter appears to have analogous functions in each quarter of the cord, and as the crossing tracts are not in them, it is probable that it does not convey the voluntary and sensitive faculties. The grey matter is, however, the primary source of power, both in the roots of the perceptive and motive nerves; for, without its healthy exciting influence and free action, the medullary matter and nerves are not capable of transmitting the sensorial influences of sensation and volition. As the appearances of venous congestion are similar in the grey matter of the brain and spinal cord after a deep sleep, and as the medullary is very little altered, it is probable that the grey in both is then, according to the congestion of the veins and the deterioration of the blood, unfit for preparing the medullary matter or nerves for conveying sensitive and voluntary impulses. In intoxication, from the gradual influence of fermented liquors, first arterial action prevails in the grey matter, and produces an adequate excitement; soon, however, venous congestion follows, and diminishes its power, and disposes it for inducing sleep. Venous congestion prevails first in the most depending or lowest part of the cord, and incapacitates the grey matter for influencing properly the origins of the nerves and

the conveying tracts, and especially those forming the voluntary crossings. At the same time venous congestion is taking place in the lowest part of the cord, it is not so advanced in the upper part or in the brain, so that the brain is capable of transmitting the voluntary and sensitive impulses, and the upper part of the cord of conveying them. It may, therefore, be presumed that the failure of power is not in the incapacity of the grey matter of the upper part of the cord, nor in the crossing tracts, nor yet altogether in the sensory, as many of the faculties of the sensory are yet perfect. There would not be any reason for the affection of the legs first, if the grey matter at the lower part of the cord were not in fault, as it can hardly be conceived that one portion of the brain would be affected before another from so general a cause, as all the senses and other sensorial faculties of the brain are simultaneously excited on the reception of stimulating fluids into the stomach. The change in the grey matter is thus insisted on in deep sleep and other causes of venous congestion, because the white is comparatively very little altered from its ordinary condition. One part of the cord, through the imperfection of the grey matter contained in it, may be incapacitated for allowing the necessary energy for conveying the will, but not the other portions. The grey matter can allow actions in each section of the cord for transmitting involuntary impulses from the sensitive to the motive nerves, although it be cut off from its perfect communication with the brain, and even then the presence of the exciting influence allows some feeling of animation in the parts supplied by the nerves of each section; nevertheless, the animation is very inferior to that imparted by the perfect connection with the brain.

The supply of blood to the spinal cord by the anterior and posterior spinal arteries connects it with the brain, and by the arteries of the nerves connects it with the nerves; so that it, or any part of it, may be, as to its circulation, in accordance with the brain, or with the muscles and skin, through the nerves. As any portion of the cord may become insulated from disease or injury, the advantages of the supply of blood from numerous sources becomes especially apparent, as well as its free

return into different veins. When the cord is in activity, and, especially through sensation and volition, its circulation in the parts most in use is more free. Without a copious supply of well-oxygenised blood, the grey matter, either of the brain or cord, is not sufficiently energetic, and without a less degree of vascularity the medullary matter is not a clear conductor.

In man, also in some animals, whatever may be the position of the spine, the arterial circulation cannot fail of being sufficiently free and bountiful in the cord; but the venous circulation, from its more passive nature, is not so equally maintained. In man the long cauda equina prevents an accumulation of blood in the lower part of the cord, especially when he is erect, but not so completely as the horizontal position does in very numerous animals. When he is in the recumbent position, its escape is not favoured by gravitation in the same free manner; for, although it does make a more ready return from the trunk generally to the right side of the heart, yet its transmission from the spine is by no means so easy as it is in animals, in which the spinal column is for the most part horizontal; for in them, whether they be standing or recumbent, the blood gravitates either into the veins entering the lower vena cava, or into the azygos, or upper vena cava; but in man it rather first gravitates towards the back, and not to the front of the spine. It was therefore the intention, after the cauda equina has lengthened itself in infancy, and the bulbous extremity of the cord has begun to rise upwards, that the upright position should be more and more assumed, and in the recumbent position that the body should lie first on one side and then on the other, not merely for removing mechanical pressure from the skin and viscera, but for allowing a free escape of the blood from the veins of the cord. By continuing long recumbent without these changes of position, plethora of the cord may be induced, first inclining to excitement, and then by venous congestion inclining to weakness; and lastly, by the long encroachment of the veins, permanently enfeebling its faculties by pressing on and diminishing the medullary and cineritious matters.

After a deep sleep, the grey matter, both of the brain and spinal cord, as-

sumes a more leaden hue, from venous repletion, whilst the white is comparatively very little altered. The change for sleep takes place in the grey, which is then not proper for communicating more than a very obscure impulse to the white. If the white had been changed in the same degree, it might not have been ready for transmitting impulses so as to rouse the sensory; and then, from so large and general an implication of the brain from the altered circulation, the faculties of the brain would have been soon annihilated by any unusual condition, as from intoxication or disease.

Independently of the muscular power employed in preserving the position of the spine, the circulation of blood has some influence in preventing weariness, and allowing an almost constant activity; and this advantage probably depends very much on the capability of the veins for emptying themselves uninterruptedly. In animals, however, which remain awake and up with so little intermission, the sense of weariness is also especially obviated by the constant appetite, the stimulus of eating, and the supply of nervous power from the continual influx of nourishment, along with the less susceptibility of the brain.

Although the arterial or venous circulation may have a tendency to produce excitement or depression in the spinal cord as in the brain, it is probable that the muscular system may be more liable to be violently implicated, on account of the great extent supplied by the spinal cord, which produces so great and uncontrollable spasms whenever it is much disordered, either by the excitement of too much blood, or the irritation from too little, or the want of power from its preponderance in the veins.

6, Tavistock Square,
March 28th, 1850.

ARISTOCRATIC SUPPORT OF HOMŒOPATHY.

ON Wednesday, the 10th inst., at two public dinners which took place in London—the one at the London Tavern, chairman Lord Robert Grosvenor, M.P.; the other at the Albion Tavern, chairman the Earl of Essex—a sum amounting to £2660 was subscribed for the maintenance of Homœopathic Hospitals in this metropolis. —*Lancet*.

*** But for the well-known accuracy of our contemporary, we should have considered this incredible.

ON THE LOCAL EMPLOYMENT OF NITRATE OF SILVER IN AFFECTIONS OF THE UTERUS.

By ROBERT OKE CLARK,
Resident Surgeon, Royal South Hants Infirmary.

As you have introduced into your pages the subject of the new method of treating ulceration, &c. of the cervix uteri, a few short notes of cases may not be uninteresting to the readers of your justly-influential journal, particularly when we consider how much in the dark we have as yet been regarding the real nature of these cases, and the immense relief that the knowledge obtained by means of the speculum has enabled us to afford to the very many who for years had not known what anything approaching to good health really was. I have seen a poor emaciated woman, who had been a constant sufferer for more than twelve years from leucorrhœa, dysmenorrhœa, &c. &c., completely cured, and regain her pristine health and strength, when once the local mischief had been discovered, and the proper treatment used.

Caroline H., æt. 21, single, of dark complexion, but not healthy appearance, was admitted into the infirmary as "suffering from irritable spine;" for which she had been unsuccessfully treated by various medical men during a course of several years; indeed, she had been an inmate of the infirmary three or four different times, and the relief she had obtained had only been of a very questionable character, she having always returned complaining of the same symptoms. The history is briefly this:—she cannot remember when she was perfectly well, but she certainly had not been so since she was six years old: from a child she had always been subject to constant pain in the back, and to very violent hysterical fits, which were preceded and followed by a great increase in the lumbar pain, and by extreme prostration of strength. Very little treatment of any sort was adopted at this period of her life.

At the age of 15 the catamenia appeared, but accompanied by intense suffering, by violent lumbar, hypogastric, and ovarian pains, and by a sense of bearing down. The menstrual periods

recurred at tolerably regular intervals, a shorter time than natural between each generally preponderating; but each return was preceded, accompanied, and followed by an increase of the local pains. During the absence of the menstrual flux, she had *invariably* been subject to a leucorrhœal discharge, and had never, even for a day, been free from pain; her general health was always very indifferent, and she was still constantly subject to her former fits, which were now rather more severe.

During the time she had before been an inmate of the infirmary every devisable plan of treatment, both external and internal, had been applied to relieve what was supposed to be a congested and irritable spine; setons, cupping, and rapid vesication with a heated cauterizing iron, seeming to give the most relief, but it was only temporary.

About the middle of last October this girl was again admitted an in-patient; and special attention having been directed to the uterus, a digital, and subsequently an ocular examination of the parts was made. The hymen was found entire, but the aperture in it was large enough to admit the index finger readily. The cervix uteri was elongated, and extended into the vagina for above two inches, forming a most curious projection, about the size of a large finger; the os uteri was swollen, and had a velvety feel; pressure caused great pain; the body of the uterus was not enlarged, but was extremely sensitive to the touch; the vagina was moist, hot, and tender. This digital examination was followed by a most violent fit of convulsive hysteria, and subsequent extreme prostration.

After the lapse of six days the hymen was divided, and a small circular speculum introduced with ease, and without any excessive pain. The cervix uteri was found much less elongated than previously, although no local treatment had in the intermediate period been adopted: around the os uteri, and dipping into the cervical cavity, was seen a patch of superficial ulceration, about the size of a sixpence. The granulations of the ulcer were rather small, but soft, and interspersed with enlarged bodies, looking mucous glands, the whole with a thick purulent discharge. When the parts

cleansed, the nitrate of silver was freely applied to the ulcerated surface, the actual extent of which now became more than ever apparent, on account of the peculiar ashy hue which the caustic communicates to it, and does not to the surrounding healthy tissue. This examination, &c., was hardly attended with so much pain and uneasiness as the first. The caustic was applied every fourth or fifth day, and on the intervening days she was ordered to use, by means of one of Clark's female syringes, an injection containing *Aluminis Sulphatis*, ʒj.; *ad Aquæ*, Oj. two or three times a day. Each examination was attended with less pain than the preceding, although with regard to the application of the caustic it was just the reverse; and I have frequently noticed that these ulcers become more painful as they heal. Her general health was improved in every available manner by tonics, good diet, moderate exercise, and the recumbent posture when not walking about.

During the second week in November the menstrual flux again came on, after five applications of the nitrate of silver; and though attended with much pain, it was not to be compared with what she had previously suffered. Again, at the proper period in December, the menses returned; the same treatment as noted above having been regularly employed, and she was now comparatively free from pain. The leucorrhœal discharge had now entirely subsided.

Third week of December.—Her general health is now most wonderfully improved; she is lusty and strong. The ulcer has quite healed, and the purulent discharge has ceased. She is to leave the infirmary to-day as cured; a little congestion only remaining, to remove which she is advised to continue the astringent wash.

CASE II.—Jane W., æt. 22, a single woman from the country, of a somewhat strumous diathesis, was admitted into the infirmary in a very debilitated state. She had had one child, which was still living.

Up to the time she became pregnant, seven months ago, she had always very good health; menstruation came on at the age of fourteen, never been interrupted or attended by any particular pain; she

had never suffered from any prolapsus of the uterus, or from any vaginal discharge. About seven months after she became pregnant she had a very violent attack of hæmorrhage from the uterus: but it was fortunately arrested, and she went on to her full time, and in the course of a natural labour gave birth to a healthy full-grown living child. All seemed to go on well, and though she did not gain strength very fast, she was able to get about a little in a fortnight; but she had not done this long before a muco-purulent vaginal discharge came on, accompanied by a constant "aching pain" in the lumbar, hypogastric, and inguinal regions, and a sensation of bearing down. In conjunction with all this, her spirits became depressed, her appetite impaired, &c. &c. This state of things continued for nearly three months previous to her admission: she was daily losing strength, and was at last obliged to transfer her child to the care of a wet nurse.

On the first examination made after her admission the uterus was found much prolapsed, even to the external orifice of the vagina; the os uteri extraordinarily patent, very congested, and excessively tender; a copious muco-purulent discharge issued from the mucous membrane of the os uteri and vagina. On applying the speculum there was seen an extensive superficial ulcer occupying the whole surface of the patent os uteri, and extending a short distance into the cervical cavity: the ulcer presented the usual characters.

When the parts had been duly cleansed the argenti nitras was lightly applied to the ulcerated surface, which did not, until afterwards, give much pain. An opiate was ordered at night, and to be followed by a dose of rhubarb mixture in the morning. The aperient was twice repeated before she was again examined, and it had the good effect of diminishing considerably the local congestion and tenderness: the ulcer had put on a healthy cicatrizing character; the os uteri was much less patent, and the body of the uterus scarcely prolapsed at all. The second application of the caustic gave rise to less pain than before. In the intervals of its application she used the common alum wash.

A great improvement in the local and constitutional symptoms soon became very manifest. A tonic containing nitro-hydrochloric acid and infusion of

cascarilla was added to the local treatment with great benefit. In the course of five weeks the caustic was applied six times: at the end of this period all symptoms of prolapsus had disappeared; the external ulcer had entirely healed, though a little ulceration remained within the cervical cavity. She was, however, considered fit to be made an out-patient, being directed to apply once a week that the cauterization might be continued. She paid her visits regularly, and all seemed going on well. On her third visit, however, she complained of much more pain than usual, of a dragging weight in the back, a sense of bearing down, with shooting pains through the hypogastric and pubic regions. She supposed it to be near one of her "periods," but she had not been "poorly" since her confinement. On examination the cervix was found entirely free from ulceration; the os uteri very congested, its lips entirely closed, and apparently adherent, having just the appearance of the adherent labia sometimes seen in infants: there was a great deal of heat and tenderness about the entire region, and the cervix descended an unusual distance into the vagina. Hoping that the adhesions in the cervical cavity might only be slight, and would yield under the efforts of nature, nothing further was done than a compound rhubarb pill given every night, and a warm water injection used frequently during the day. At the end of eight days she *almost suddenly* experienced relief by the accession of the catamenial discharge, evidently dependent on the breaking down of the adhesions formed at the mouth of the cervical cavity. The menstrual flux continued about five days, and left her free from pain. On making another examination, slight spots of ulceration could be seen, but no application was made to them; and since that time she has had another return of the catamenia, and this time was entirely free from pain. She is now perfectly well, and in robust health, not a trace of ulceration remaining, nor has she any vaginal discharge whatever.

I notice the first of these cases to show how great relief may, with our present knowledge, be given to suffering of very long standing, perhaps during a whole life, and which we were unable formerly to render; and the second case for two reasons: first, how much suf-

fering may probably be prevented, if the right treatment be applied at the outset; and secondly, to corroborate the remarks made by Dr. Williams on a similar case related by him in a former number of your journal.

Southampton, April 4, 1850.

CASE OF

POISONING WITH ARSENIC.

DEATH IN THIRTY-SIX HOURS—INFLUENZA OF ARSENIC ON DIGESTION—REMISSION OF SYMPTOMS.

By A. G. GREAVES,

Surgeon to the Derby Dispensary.

On the 26th of February, 1847, Mrs. Ann W—, aged 24, in the ninth month of pregnancy, was taken ill at half-past 9 A.M. with sickness and vomiting, having an hour previously partaken of a breakfast of tea and bread and butter. The vomiting continued at intervals during the day, the matter thrown up consisting principally of bile. No medical assistance was called in, deceased saying that she thought her illness was owing to her pregnancy.

27th.—Mrs. W. vomited once at 9 A.M., and then felt very much better. She cleaned her house thoroughly during the morning, took some gruel at half-past 12, and at 1 P.M. left home, as she said, for a walk. She returned at 2 P.M. and stated that she had been obliged to call at the house of a friend about two hundred yards from her home, having again been sick. At half-past 2 she again threw up a quantity of what, from the description given, I supposed to be bile. At half-past 4 I was called in, and found her seriously ill, complaining of violent pain in the stomach and abdomen, with diarrhoea and tenesmus, and great difficulty of breathing. She sank rapidly, and died at a quarter past 7 P.M.

I ascertained that deceased had felt the movement of the child a very short time before her death, and I therefore urged the friends to allow me at once to open the uterus and remove the fœtus; but they objected.

Post-mortem, 22 hours after death.

Head.—Brain and the membranes perfectly healthy.

Chest.—Lungs contained a considera-

ble quantity of dark blood. The heart was very flaccid, and both ventricles were filled with fluid blood of a very dark character.

Stomach contained about a pint and a half of bloody fluid, on pouring off which I found a very large quantity of exceedingly viscid albuminous secretion, containing numerous patches of a white powder, which analysis proved to be arsenic. The mucous membrane was much inflamed.

The duodenum was also inflamed, and contained one or two patches of the same white powder. In the caput coli was found a considerable quantity of *undigested* soup, containing several patches of undissolved arsenic, precisely like those in the stomach.

The bladder was empty and healthy. The uterus contained a fine healthy child, but there was no evidence of labour being near. The membranes were entire, and everything in a normal state. A careful analysis by myself and my friend Mr. Bernays, showed most unequivocally the presence of a large portion of arsenious acid in the contents of the stomach, but by whom administered there was no evidence to show, beyond a remark of the deceased, "that it would be a shocking thing if she and her husband should be found dead in bed." This led to a suspicion that it was an act of suicide.

We have, unfortunately, no satisfactory data to form a conclusion as to when the *fatal* dose of arsenic was taken. There can be no doubt that some of the poison had been administered on the 26th, thirty-six hours before death, but whether that was the dose of which she died is uncertain. It is interesting to remark how large a portion of arsenic remained in the stomach, notwithstanding the continued vomitings the deceased had had for five hours before death.

There are some circumstances connected with this case which are of interest in a pathological view. It appears that the deceased partook of a quantity of soup about *seven* hours before her death; and yet, although this long period had elapsed, it was found in the caput coli in an undigested state, and mixed with a quantity of arsenic. But for this fact being well known, it might have been inferred that deceased had taken a large dose of arsenic in soup three or four hours

before death. This appears to show that the action of arsenic materially interferes with the process of healthy digestion.

Another circumstance worthy of notice is, that there was so complete a remission of the symptoms after the poison had been swallowed, that the deceased was able to occupy herself in her usual avocations, and to go for a walk.

Derby, April 5th, 1850.

ANIMAL POISON. BY DR. FISHER.

R. S. W., aged 40, residing in Dedham, on the 5th day of September, dressed a sore on the leg of a horse, which had existed a few days, and caused the limb to swell enormously. At the time of dressing the sore, the patient did not know that he had any abrasion of the skin of his hand or fingers. On the second day after dressing the sore, he perceived a small pimple of a lengthened form on the dorsum of the little finger of the right hand, situated midway between the second and third joints. His attention was directed to the pimple by an itching sensation, which caused him to rub it often. The pimple soon began to increase in size and the finger to swell, so that, at the end of two weeks, the finger had enlarged to three times its usual dimensions, becoming very painful and red, and sore as a common boil. At this period he applied poultices to the finger, without, however, relieving the pain or diminishing the swelling. During the third week red lines were observed by the attending physician passing up the inner surface of the right arm, and the arm began to swell; and in a short time the whole arm from hand to axilla attained to double its common size. The glands in the axilla became tender, painful, and sore to the touch. At this time the original sore on the finger had assumed a purplish colour; and by the middle of the third week its surface opened, and a little thin dark liquid came from it. The glands of the right groin now became painful, swollen, and tender, and the right lower extremity became swollen, and the inner side of the whole limb, especially along the tract of the large bloodvessels, became sore. At about the same period the patient experienced a general soreness in the abdomen. This cavity became distended and tender, so that the weight of the hand caused much pain. The glands of the right side of the neck were also affected, and became enlarged, painful, and sore. In one or two days after the whole of the right half of

the body had become thus affected, the left lung became involved. The glands of the left side of the neck, of the left axilla and groin, and the inside of the left leg became affected, but not to the degree that was experienced in the same bodies and regions of the right side. The left arm and leg were not much swollen, but were as painful as were the right arm and leg. The sore on the finger was opened three weeks after the first appearance of the pimple, and discharged matter freely until Oct. 12th. The swelling, soreness of the limbs and glands, gradually subsided with the progress of the discharge from the sore; so that, on the 16th of October—the day of my second and last visit to the patient—the affected members and parts had assumed nearly their natural size and sensations.

The general symptoms were chills and fever; numbness in all parts of the body; a kind of catalepsy of the limbs; occasional feeling of fainting; nausea without vomiting; dull pains in head and back; quickness of pulse; palpitations of the heart; loss of appetite; oppression in epigastrium after meals; constipation of bowels; difficult micturition; great debility; watchfulness.

The treatment was poultices to sore; brandy and quinine in frequent and large portions. As has already been stated, the patient, on October 16th, forty-one days from the time of the infection, had recovered, or nearly so, the usual size of his limbs, and their usual sensations. He was still much debilitated, and complained of some degree of numbness in the right arm and little finger. The wound on the finger had healed, but had left a rather broad-lined scar. The finger was larger than natural, hard, and the skin covering its upper surface thin and glossy. The scar was one inch in length.

The horse from which the patient received the infection had a small wound on his limb; and, after a few hours of rapid travelling, the limb began to swell and became very large, and the sore to discharge matter. The animal was sick two weeks, and recovered.

The owner of the horse suffered severely from a sore situated on the end of one of his thumbs, which he now thinks was caused by dressing the wound on his horse. The skin on the thumb was not broken at the time. The thumb swelled; matter formed in it, and was discharged by an operation. No constitutional symptoms followed this infection.—*American Journal of Med. Sciences*, Jan. 1850.

MEDICAL GAZETTE.

FRIDAY, APRIL 19, 1850.

THE case of *HYETT versus the CHELTENHAM BOARD OF GUARDIANS*, reported in our last number,* involves a question respecting the remuneration of medical practitioners for extra services in Poor-Law Unions, which is both novel and important. The story is soon told. The plaintiff had been surgeon to the Union for a period of nine years, and the evidence showed that during this time he had been a very efficient and faithful officer. In March 1849, for some reason which does not appear, he was not re-elected, but a Mr. Hewson was appointed in his place. As, however, this gentleman was not properly qualified, there was a new election, in which a Mr. Cockle was the successful candidate. The latter could not enter upon his duties until approved by the Poor-Law Commissioners; and in the meantime, as the Union required medical attendance, the plaintiff was requested by the Guardians to continue his services, without any special agreement as to remuneration. His claim for twenty-five days, including midwifery cases, was only *fifty* pounds. The defendants, on the other hand, calculated the value of his services according to the old Union scale of payment, and they asserted that the utmost amount which he could claim was £5. 7s. 6d. However, they tendered him £20, by which act they acknowledged that they had been underpaying him as Union Officer for nine years at the rate of about 75 per cent. per annum. The charges now made, amounting to nearly ten times the sum which the plaintiff would have received as medical officer, were

proved to be very reasonable, and rather under than over the average. Of course, with such evidence, there could be no defence: the plaintiff, when engaged, was no longer an officer of the Union, and therefore his scale of remuneration could only be regulated by the usual practice of the profession, and the time and services rendered to the defendants. The counsel for the latter contended that the plaintiff was claiming an amount equivalent to £500 per annum, instead of the Union salary of £180; without perceiving that, after the proof of the reasonableness of the charges, he was actually convicting his clients of underpaying their medical officer at the rate of £320 per annum!

Mr. Justice Patteson, who tried the case, very justly said—that “there was no person in the world who was worked so hard, and paid so badly, as a country surgeon.” In this opinion the jury concurred, and returned a verdict for the full amount claimed.

The sum thus awarded, and the costs of the action, will probably be thrown on the unfortunate ratepayers, the guardians escaping with a reprimand from the Poor-Law Commissioners, because they engaged the plaintiff without entering into a special contract. We, on the other hand, tender them our thanks for the omission, since it enables the public and profession to compare the amount paid to Union Officers for their official services, with that which is fairly due to them as independent practitioners. The verdict must have surely satisfied the Cheltenham Guardians that they are now equitably indebted to the plaintiff for a yearly arrear during nine years, of three-fourths of his lawful salary. On their own admission, they have been receiving for five pounds seven shillings and sixpence, services which they themselves valued at *twenty*, and *the jury* estimated at *fifty* pot *their own*

* See page 654.

estimate, we shall be glad to have an early opportunity of announcing to our readers that, like the numerous conscience-smitten friends of the Chancellor of the Exchequer in the daily notices of the *Times*, they have come forward handsomely, and have repaid to Mr. Hyett the full arrears of his fair salary.

WE cannot allow another week to pass without saying a word in favour of the excellent Society of the proceedings at whose recent anniversary dinner we have given a short report at page 658 of our last number. We need hardly say that we allude to the SOCIETY for the relief of the WIDOWS and ORPHANS of MEDICAL MEN. We know of no subject which should more deeply interest the metropolitan members of the profession than this. Medical men, as a body, notoriously neglect the benefits of life insurance. With a knowledge that the resources required to maintain a wife and family in respectability, depend on their successful exertions during life, it is too much their habit to postpone the consideration of the welfare of those who are dear to them until it is beyond their power to benefit them. They live from year to year to the full extent of their incomes, in order to keep up those appearances without which, unfortunately, practice is likely to forsake them; and at their deaths a widow and children are compelled to appeal for support to the benevolence of the profession. How often has such an appeal been made through the pages of this journal, and, we have reason to believe, not unsuccessfully!

Let every member of the profession, whose income depends on his life, look beyond the present hour, and consider whether, as a Christian, it is not his duty to provide hereafter for those who now live by his exertions, and who in the progress of events may survive him.

As a man of a religious and conscientious mind, there is but one course for him to pursue—namely, not to leave his wife and children to the chance benevolence of the world; but, by a small annual deduction from his income, to secure for them an annuity which may provide for their necessities when he is removed from them. Life-insurance offers one and an admirable resource for this purpose; but in good and responsible offices this is often too costly for the greater number of medical practitioners. On the other hand, a SOCIETY like that whose cause we are now advocating, offers, on terms accessible to most medical men, the means of providing for their widows and orphans. We make the following extract from the preface:—

“It unites the advantages of a Provident with those of a Benevolent Society. It is provident, as the Members may through it protect their families from destitution; and it is benevolent, as its benefits are conferred on those who are left in indigent circumstances. All duly qualified members of the profession residing within the limits of the Society, *i. e.* within any part of the county of Middlesex, or within seven miles of the General Post Office, are eligible for proposal, and the mode of admission is by ballot.”

This Society is not one of the speculative novelties of the day: it has been already established for a period of fifty years, and its affairs are under the control and management of responsible and highly respectable professional men. All qualified medical practitioners are admitted under certain restrictions. The payment of two guineas per annum as a subscription is really small, considering the benefits conferred, and the life-composition is also fixed at a very moderate sum according to age.*

* A copy of the laws for admission into this Society may be procured on application to Mr. Walshe, the Secretary, 42, Half-Moon Street.

With this statement, it is not a little surprising that, out of 2567 gentlemen practising medicine in the metropolis, there are only 352 names enrolled on the books of the Society! This is less than one-seventh; but, considering the wider limits of the Society, there is probably not *one practitioner out of ten* who has up to the present time availed himself of its benefits. This apathy cannot arise from any distrust of the Society,—from any difficulty in obtaining admission,—or from the amount of the annual subscription. A stranger might be led to infer that nine practitioners out of ten have already protected their families by life-insurance, or have accumulated large fortunes: we are most unwilling to believe that the neglect to enrol themselves in this Society arises from an utter indifference to the welfare of those who may survive them.

A BILL on the subject of the interment of the dead has at length been introduced into the House of Commons by Sir George Grey, and read a first time. Its provisions are based upon the report recently issued by the General Board of Health, and the whole of the working of the proposed measure is to be entrusted to this Board. Its operation will be confined to the metropolitan districts.

“Burial grounds will be provided either within or without the limits of the district, which would be placed under the control and management of the parties entrusted with the execution of the act, who would also be authorised to fix the fees and payments to be made upon all interments within these grounds. Power would be given to take any of the cemeteries which had been established under acts of Parliament within the district, making compensation to the companies. Power would be given to shut up any of these cemeteries which it should seem advisable, on the ground of public health, no longer to retain as places of interment,

and, on the other hand, to retain for that purpose such others as it might be deemed expedient to continue. Every burial-ground to be provided under the act would, like all the great cemeteries hitherto established, be divided, one portion being consecrated and provided with a suitable chapel for the performance of service according to the rites of the established church; the other portion being left for interment of persons of other denominations. Power would further be given to set apart portions for those denominations who, on religious grounds, required separate places of interment. When one or more of the burial-grounds to be provided under the act should be opened for interment, the Queen in Council would be empowered, upon the report of persons entrusted with the execution of the act, and after due notice, to order burials in churchyards, and other existing graveyards in any part of the district, to be discontinued, subject to any exceptions that might be thought necessary, and the prohibition might from time to time be extended until interments were discontinued throughout the metropolis, with such saving of existing rights of burial in vaults and the like as might be exercised, under certain precautions, without prejudice to the public health. The inhabitants of the parishes in which the burial-grounds were closed would have the same rights of interment in the new grounds as they had in their own burial-grounds; and, to provide for the natural wishes of persons to be buried near the bodies of their own relatives, power would be given to remove, without the expensive process called a ‘faeuity,’ bodies from the intramural places of interment into the new grounds. The persons who were to superintend the execution of the act were to be empowered to provide, within the limits of the district, places of reception to which the poor (who were now so often endangered by the continuance of the bodies of their deceased relatives in the rooms occupied by the living) might have the corpses removed. A great practical difficulty in extramural interment was the removal of the bodies to a distant cemetery, especially in the cases of the poor; and it was therefore proposed to empower those appointed to execute the act to provide means (of which all who chose might avail themselves) for conveying bodies to the places of interment,

and for conducting the funerals, at specified and moderate rates of payment,"

Such is a general outline of the new measure. It appears to meet all the objections which have been hitherto successfully opposed to this necessary change. In a financial view, it is calculated that the payments for interments will ultimately cover all the expenses; and that, in the first instance, it will not be necessary to do more than lay a rate of a penny in the pound on the inhabitants of the districts benefited by the measure.

A few years since such a scheme was pronounced to be an impossibility in the House which has now adopted the bill!

WE have to announce to our readers that we shall in the ensuing number commence the publication of the LUMLEIAN LECTURES, recently delivered at the Royal College of Physicians by Dr. R. B. TODD, Physician to King's College Hospital. We shall, also, shortly commence the publication of a series of Lectures on the MEDICAL JURISPRUDENCE OF INSANITY, by Dr. R. JAMIESON, Professor of Medical Jurisprudence in King's College, Aberdeen. These lectures will be revised by the Professors for publication in this journal.

EPIDEMIC OF CYANACHE PAROTIDÆA.

It appears that this disease has prevailed epidemically in and around the metropolis during the last two weeks. From information which has reached us, it has extensively attacked adults, and the concomitant fever has been attended with great prostration of strength, and much gastric irritation. Dr. Churchill states that it was generally epidemic in Dublin, and other parts of Ireland, during the spring of 1849. This is a disease on the existence and diffusion of which the weekly tables of the Registrar-General throw no light. We require a table of morbidity as well as of mortality.

Reviews.

Hastings considered as a Resort for Invalids. By JAMES MACKNESS, M.D. 12mo. pp. 187. London: Churchill. 1850.

If this work be intended for general readers, we think it too profound; if for the professional reader, it is but superficial,—at least in the medical portions. It contains observations on the geological character of the soil of Hastings and its vicinity; meteorological tables, which show that the temperature of Hastings is lower during the nights of winter months than that of London; observations on the nature of sea-air; medical statistics of Hastings, proving its salubrity; the medical history of pulmonary consumption, comprising abundant quotations from Sir James Clark and other authors, and treated at sufficient length to perplex and frighten the non-professional invalid; a catalogue of other diseases for which the climate of Hastings is suitable; directions as to the choice of a residence at Hastings; remarks on the importance of exercise and amusement (the secret, we may observe, of the benefit of this and every other watering-place); on clothing, diet, and regimen; the chemistry and physiology of digestion, according to Liebig; the oft-told tale of Alexis St. Martin; and lastly, some sensible remarks on bathing.

The non-medical portions of this work are written in a clear and concise style. If medical matters had been omitted, or more lightly touched upon, it would have formed an interesting, instructive, and safe guide for the invalid visitors of Hastings.

A Treatise on Inflammation of the Eyeball. By ARTHUR JACOB, M.D., F.R.C.S., Professor of Anatomy and Physiology in the Royal College of Surgeons in Ireland, and one of the Surgeons of the City of Dublin Hospital. Small 8vo. pp. 344. Dublin. 1849.

WE cannot better introduce this treatise to the notice of our readers than by the following quotation from the author's preface:—

"My object is not to supply a mere ephemeral sketch of extant information on

this subject, but to provide a digested summary for the permanent use of students and practitioners. The statements and observations which I have made on my own authority are the result of very long practice in this department of surgery; and those which I have made on the authority of others have been carefully selected from the best sources within my reach. I offer the work as an introduction to the study of diseases of the eye, believing that inflammation and its consequences constitute the largest proportion of these maladies; and I address it more to physicians and surgeons in general practice, and to students, than to those more exclusively devoted to this branch of the healing art. This I do because I think that the study of these diseases should be restored to its original conspicuous place amongst the most favoured topics of medical instruction, rather than abandoned to a more limited cultivation."

Such being the author's object, we proceed to point out its manner of execution by one or two brief extracts:—

"I want the practitioner to recollect that, when he sees the sclerotic red, and the iris discoloured, he has not to contend with inflammation of the iris only, but with inflammation of the whole eyeball, and, above all, with inflammation of the retina. I would even go farther, and express my conviction that the attempt to insulate or to confine the inflammation of the eye to particular structures, under the names of iritis, choroiditis, retinitis, corneitis, scleritis, aquo-capsulitis, and hyaloiditis, has not proved serviceable in practice. It looks very methodical, and appears plausible and accurate in books and lectures: but, when we come to test the matter by observation, we find many of these apparent distinctions vanish, and discover that it is only a progressive inflammation of the whole organ, more conspicuous at the commencement in some particular part" (p. 2).

"It does not appear that inflammation of the eyeball requires to be treated on principles different from those which guide us in the treatment of inflammation of other parts" (p. 34).

In this manner the author lays down *principles* for the study and treatment of inflammation of the eye, including all the varieties which have been pointed out and severally named by writers on ophthalmology. The work does not include the strictly surgical or operative treatment of diseases of the eye, as we have said

in the clearest manner, the fundamental principles of their medical treatment, and carries these out in their application to the various forms of disease.

Dr. Jacob remarks at the close of his preface:—

"For practitioners who may think the work worth consulting, I have provided a table of contents and an index. Students I advise to read it through, or to leave it untouched."

For our own part, we would advise both practitioners and students on no account "to leave it untouched," but on the contrary "to read it through," and that not carelessly. It is not a big book, but a very good one. We can recommend it both to students and practitioners as a safe and useful guide in the treatment of inflammations of the eyeball.

Researches on the Development, Structure, and Diseases of the Teeth. By ALEXANDER NASMYTH, F.L.S., F.G.S., M.R.C.S., &c. 8vo. pp. 230, and plates. London: Churchill. 1849.

This is a posthumous work, and therefore, in one sense, defenceless; but did its contents, nevertheless, furnish a *casus belli* to the critic, the plain and straightforward but touching appeal of the author's widow, by whom the work is published, would put us completely *hors de combat*. We here quote it:—

"To the Medical Profession.

"Gentlemen,—Before the fatal seizure of my late lamented husband, he had just completed the MS. of a treatise which I have now the satisfaction of presenting to you,—the result of long professional inquiry and patient investigation. He was impressed, no doubt, with its general usefulness,—had pursued the occupation with undiminished ardour to the end; and I can assert in the most unqualified manner that its production before the public was his first, his unchanging aspiration.

"With this knowledge, and the desire of carrying out to the utmost the wishes and intentions of one of the best of men, I have committed these pages to the press, and to your especial notice and acceptance. While encouraged by something beyond a natural reliance upon the author and his probably well-founded pretensions,—risking, like many of us, in the pursuit of science, inevitable inaccuracies, deprived of remedy, may be supposed incidental to any anonymous publication,—I still

hope for countenance in my act from your favourable judgment upon it, to the high importance of which I could not be insensible.—I am, gentlemen, your obedient and much obliged, Marian Nasmyth."

Committing, then, this work, in the words of the widow's earnest and confident dedication, "to the especial notice and acceptance of the profession," we think our proper course, under the peculiar circumstances of its publication, will be simply to set before our readers an outline of its contents; forbearing all comment, and leaving its true merits to the verdict of the profession—a court which will not err, either from fear or favour.

The introductory observations of the first chapter give a brief sketch of the comparative physiology of the teeth, and of their adaptation to the physical condition of animals and man. The next chapter contains the descriptive anatomy of the face, mouth, tongue, glands, &c. This is followed by the descriptive anatomy of the teeth. The minute anatomy of the several structures which enter into the composition of the teeth next succeeds. In this portion the chief point that the author had in view is the demonstration of the fibrous structure of the ivory, in opposition to the opinions of its tubular nature as entertained by "Retzius and his followers." The fifth chapter describes the development of the formative organs of the teeth, and the process of extrusion of the latter at their due periods. The sixth chapter contains the minute anatomy of the dental capsule and pulp. The process of development and extrusion of the permanent teeth follows. The ninth chapter consists of an essay on the ethnological relationship of the teeth—their indications of the progressive improvement of the human race. The development of ivory and the chemical composition of the teeth conclude the volume.

We may add that the work throughout is fully illustrated with woodcuts and plates. It presents a complete history of the teeth, and their minute and general anatomy, and we can strongly recommend it to our readers as a valuable contribution to the history of the teeth.

Essays on Syphilis. By JOHN HAMILTON, Surgeon to the Richmond Hospital, Dublin. Pamphlet, 8vo. pp. 40, and two coloured plates. Dublin: Fannin. 1849.

THE essay before us, on "Syphilitic Sarcocoele," is the first of a series on the more important parts of syphilis, which the author purposes to publish, "should the profession receive this essay favourably."

That the profession will receive this essay favourably we make not the slightest doubt: should our prediction, however, prove erroneous, we trust that the author will not be deterred from acting up to a sense of his duty in contributing his mite to the common treasury of surgical records, under the conviction which he expresses, and in which we cordially concur, that "an hospital surgeon, of moderate observation and diligence, cannot be long without discovering, in the mass of disease submitted to his care, something which really is, or that he believes to be, an addition to the knowledge already existing."

Mr. Hamilton describes two forms of syphilitic sarcocoele:—

"First. The simple syphilitic sarcocoele is met with in persons of healthy constitution; and when accompanied, as it usually is, by other secondary symptoms, they are regular, well-marked, and uncomplicated." (p. 5.) Second. The tubercular form is much more common, and differs materially, both in local and constitutional symptoms, from the simple form." (p. 10.)

The history and symptoms in both forms are well exemplified in the cases which Mr. Hamilton has selected. We add the author's description of the pathological changes observed in the testicle:—

"First. A deposition of firm lymph of a pale yellow colour into the interstitial cellular tissue, external to the tubuli testis, as well, probably, as into the tubuli themselves. For if it was not into the cellular tissue external to them, we ought to be able to see the arrangements of the convoluted tubuli, which we are not, the section appearing homogeneous, with the exception of some fibres shooting through it." (p. 21.)

Mr. Hamilton has established this point also by careful maceration and dissection.

"Secondly. A much more common pa-

thological appearance of syphilitic disease of the testicle is the appearance of one or more tubercles in the epididymis or body of the testicle. We not only meet with it more frequently, because the tubercular is more common than the simple syphilitic sarcocole, but also because the disease of the testicle is sometimes only a small part of a general state of disease, under which the patient sinks, and we, therefore, have more frequent opportunities of making post-mortem examinations. These tubercles are of a yellow colour, of a consistence rather less firm than that of coagulated lymph. Very small at first, they gradually enlarge, and, according to their duration, may vary in size from that of a hemp-seed, or split pea, to that of a chesnut, or even larger. They have a well-marked cyst, which can by careful dissection be separated from the yellow inorganic substance contained in them, and from the glandular substance of the testicle in which they are imbedded: the yellow substance within the cyst has sometimes a laminated arrangement. It is proved to be inorganic by not receiving any injection when the testicle has been most successfully injected." (p. 23.)

The plates which accompany this excellent practical essay "were lithographed by Messrs. Hanhart, of London, after drawings by Mr. Conolly, whose admirable talent for the delineation of pathological appearances is well known in Dublin."

POISONING WITH EXTRACT OF BELLADONNA.

DR. BOULAY having occasion to send to a distance for some medicine which he had prescribed for a patient, wrote also on the back of the paper for some other articles, to be procured from the same shop. The druggist put up these articles, one of which was a mixture of fifteen grammes (= three drachms and a half, Eng.) of extract of belladonna, with five grammes (= one drachm fifteen grains, Eng.) of water. This mixture he handed to the messenger, the son of the patient, with a packet containing other things. The boy having been told that he was to bring a purgative draught for his mother, took the bottle direct to her, and poured its contents into a glass. The woman drank off all the mixture with the exception of a very little left at the bottom of the glass. In a few minutes she fell into a profound stupor, from which it was impossible to rouse her. She died in the course of twenty-six hours. The autopsy revealed no lesion to account for so rapid a death.—*L'Union Médicale*, Mars 16, 1850.

X

Proceedings of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, April 9, 1850.

DR. ADDISON, PRESIDENT.

Case of Scrofulous Abscess of the Anterior Mediastinum communicating with both sides of the Chest, the Trachea and Pericardium, and forming a Tumor above the Clavicle, simulating Aneurism of the Innominate Artery, or Arch of the Aorta.
By D. MACLACHAN, M.D., Physician to the Royal Hospital, Chelsea.

AN old soldier, 61 years of age, was admitted into the infirmary of Chelsea Hospital on the 5th Jan. 1849, with an elastic tumor, of the size of a tennis ball, immediately above the external end of the right clavicle, and dipping underneath this bone. It was free from pain, bruit, and pulsation. The carotid on this side beat feebly, and the pulse at the temple and at the wrist was scarcely perceptible. Deglutition was difficult, the voice husky and indistinct. Respiration, at all times impeded, was occasionally asthmatic. An incessant teasing dry cough prevented repose. The features were congested, the lips livid, and the external jugulars gorged. The patient was seldom free from pain in the back of the head, and pain, with numbness, extending from the clavicle down to the ring and middle fingers of the right hand.

Ten months before admission he contracted a cold, and since then he had continued to suffer from a frequent cough, with increasing difficulty of breathing; but though unable to work he had never been obliged to entirely lay up. About three weeks before he was admitted into the infirmary, the tumor suddenly appeared after a violent fit of coughing. It was then not much larger than a marble.

The whole of the right side of the chest, anteriorly and posteriorly, was unequivocally dull on percussion. Some fulness existed in the right infra-clavian region. Altogether the physical signs pointed to extensive effusion into the right cavity of the chest; yet there were circumstances, the author observes, and refers to in a subsequent portion of the paper, rendering a positive declaration of this hazardous.

The precordial region was extensively dull. There was no perceptible impulse of the heart, and at no period were its sounds audible. No alteration took place in the physical phenomena. Rather suddenly,

about three weeks after admission, the respiration became more embarrassed, and the spasmodic fits of difficulty of breathing more frequent and severe. The expectoration became mixed with florid blood, but was still catarrhal, till a week before death, when it was purulent.

Some fulness was observed along the lower part of the right side of the neck, on the 28th January, extending backwards. Neither in this swelling nor in the circumscribed tumor itself was there any impulse communicated on coughing. An exploring needle having detected pus, a small opening was made in the tumor on the 30th Jan., and exit given to two or three ounces of sero-purulent curdy matter. The patient now rapidly sank. On the day after the operation his breathing was freer. Each fit of coughing was accompanied with a jet or gush of sero-purulent matter from the opening. The right side of the chest, from the clavicle to the nipple, regained its lost sonority in a remarkable degree, and the respiration in the apex of this lung became puerile. Death happened on the 7th of February.

On opening the chest, the anterior mediastinum was found enormously thickened, and in the centre of the diseased mass an almost empty abscess of the size of a billiard-ball was observed. This abscess communicated by several fistulous openings with the right side of the chest, and with the pericardium by an ulcerated perforation of the size of a fourpenny-piece. It also communicated with the tumor or abscess in the neck. Several fistulous openings also existed in the trachea. The innominate, and a considerable portion of the right subclavian, were embedded in the indurated mass. The right side of the chest contained several pints of sero-purulent fluid; a small quantity lay in the left side, and the pericardium held about a pint.

The author was induced to submit the case to the Society on account of the many points of interest it suggested for the consideration of the physician, the surgeon, and the morbid anatomist, as well as on account of the comparative rarity of the disease. He proceeded to review the history of the case, and to point out the difficulties attending the diagnosis. He noticed the difference in the symptoms from those of acute mediastinal pleurisy ending in suppuration; and also the character which distinguished the case from cases of intra-thoracic aneurism, finding its way outwards, as well as from cases of malignant disease of the lung with corresponding tumors in the neck.

The author purposely omitted entering into the details of the treatment pursued. Diuretics were prescribed, and sedatives

ordered, with the view of removing the fluid from the chest and relieving the cough, but without the least benefit; and opiates, instead of allaying the cough and difficulty of breathing, were so positively injurious that they had to be discontinued. A few general observations concluded the paper.

Case of Mollities and Fragilitas Ossium, accompanied with Urine strongly charged with Animal Matter. By WILLIAM M'INTYRE, M.D.

The subject of this case was a tradesman, aged 47. When placed under the author's care, in October 1848, he was confined to the house with severe pains of the chest, back, and loins, from which he had suffered more or less for twelve months. Latterly the pains had increased in severity, and were now so excruciating under every movement of the trunk, that it was not without much difficulty and torture that he could assume, or for any length of time maintain, the erect or sitting posture.

The patient dated his illness from the occurrence of a strain of his body, fourteen months before, while springing out of a narrow passage, when he felt, on coming to the ground, as if something had snapped or given way within the chest, and for some minutes he laid in intense agony, unable to stir. The pain soon abated, and eventually left him almost entirely; but after the lapse of a month he was suddenly, and without apparent cause, seized with acute pain in the chest, which was considered to be inflammatory. Abstraction of blood from the arm relieved him, but was followed by great weakness, from which he had imperfectly rallied, when he was laid up by a second and more severe attack, which was treated as pleurisy. The relief obtained from bloodletting, this time, was less than on the previous occasion, while the prostration which followed was much greater, and went on progressively increasing, with continued wasting, loss of colour, and puffiness of the face and ankles. He was then put upon a course of steel with quinine, under which, and a residence on the sea coast, he improved rapidly, and for some time was capable of taking active exercise in the open air. This favourable progress was suddenly arrested by an attack of diarrhoea, which proved obstinate, and again reduced his strength. In September he returned to town, much debilitated, but free from excruciating pains till within a few days of his being seen by the author, when they had assailed him in their former intensity. He was, however, quite free from fever, and had no thirst; but his appetite was keen, sometimes, indeed, voracious. The urine was reported to be natu-

ral in quantity and appearance, but on being examined by the author it was found to contain an enormous amount of albuminous matter, but to present, with the usual tests, reactions of an anomalous and remarkable kind.

1. Treated by heat, this urine gave no indication of the presence of albumen at the ordinary coagulating temperature, 160° or 170°, and preserved its fluidity till the boiling point was reached, when it became hazy, then gelatinous, till, under prolonged exposure to the high temperature, it acquired a horny consistence. The material thus disengaged exhibited the characteristics of albumen.

2. Nitric acid caused no immediate precipitation: on the contrary, the urine, if previously turbid, became instantly clear, and retained its transparency and fluidity for an hour or longer, when it was found to have consolidated into a firm yellow mass, which, unlike a coagulum resulting from the action of nitric acid on serum and ordinary albuminous urine, underwent complete solution on being heated, but again formed on cooling.

These unusual phenomena continued to characterize the urine throughout the subsequent progress of the complaint to its fatal termination, which took place two months from the time the patient came under the author's care. Several eminent physicians were consulted on the case, but without their being able to throw any light upon its nature, or to alleviate materially the patient's sufferings, which were extreme.

On inspection after death the ribs were found to be in a state of softening and fragility, admitting of being easily cut by the knife, and readily broken by moderate force. The sternum was in the same condition, first bending, and then snapping across when raised and turned back. The spine, throughout its cervical, dorsal, and lumbar divisions, had undergone a similar morbid transformation. The external laminae of the diseased bones were of a reddish colour, and atrophied; their interior loaded with a red, pulpy, and unctuous material like that found occupying the cancelli of the long bones of the extremities when they are affected with this disease. With the lumbar vertebrae the disease seemed to have stopped, for the bones of the pelvis resisted the knife, and presented no notable deviation from their natural appearance.

No material lesion was found in any of the thoracic or abdominal viscera, and it was particularly remarked that the kidneys were perfectly sound.

From the minute anatomical examination of the affected bones

made by Mr. Dalrymple, it would seem that the disease had commenced in the cancellated structure, but that the external laminae were also involved. The red substance filling the large cancellous cavities in the interior was found to be composed of granular matter, oil-globules, nucleated cells, a few caudate cells, and blood-discs extravasated among the other cells. This description accords with Mr. Birkett's account of the appearances he observed in the case described in the Society's *Transactions* by Mr. Solly, and seems to point to a disease essentially malignant in its nature, but differing in some special particulars from the true malignant disease of bone as we are accustomed to regard it.

Analyses of the urine were separately made by Dr. Prout and Dr. Bence Jones, both of whom had seen the patient with the author and Dr. Watson. Dr. Prout was led to infer, from his investigation, that the animal matter present was albumen in some peculiar state of combination or condition. He had found albumen in this state in the urine before, but never in such large quantity. This opinion was strengthened by the more elaborate analysis of Dr. Bence Jones (already published in the *Philosophical Transactions* for 1847). He succeeded in separating from the urine a substance which exhibited, among other characters, the peculiar reactions with nitric acid which were so strikingly seen in the early experiments. Upon ultimate analysis, this new substance he determined to be a hydrated deutoxide of albumen.

The author, after referring to the familiar fact that in *softening* of the bones, occurring as an active disease in the adult, the earthy matter of which these structures are despoiled is excreted along with the urine, regards the present case as an evidence that in an opposite condition—*fragility* of bones—the animal constituents are in like manner absorbed and carried out of the system. Under this impression he gives a detailed account of the reactions of the morbid urine, hoping that a knowledge of these may assist us in recognising this formidable malady at an early period of its invasion, before it has arrived at its stage of full development and incurability.

WESTMINSTER MEDICAL SOCIETY.

March 20, 1850.

DR. MURPHY, PRESIDENT.

*of Air into the Uterine Veins
cause of danger and
tion.* By J. R. COR-

of three parts:—1.

The various effects caused by the entrance of air into the veins, and the appearances found on dissection. 2. Statement of facts proving that the entrance of air by the open mouths of the uterine veins may cause dangerous symptoms, and even death. 3. Suggestions as to the prevention and treatment of such accidents after parturition; with remarks upon the precautions required in injecting the uterus after delivery for uterine hæmorrhage. The opinion that the entrance of air into the uterine veins might be a source of danger and death after parturition, had been enunciated by Legallois in 1829, and subsequently by Olivier; it had likewise been supported by Dr. Cormack in his "Graduation Thesis," published at Edinburgh in 1837. Dr. Cormack had attended cases in which air had been drawn into the womb after delivery by the sudden relaxation of the organ, and occurrences of this kind he supposed must be frequent. Dr. Cormack quoted Dr. Meigs' very graphic description of the way in which air was often drawn in and then expelled with noise by the womb after delivery. Dr. Cormack wished to prove that if any impediment existed to prevent the exit of the air which had been drawn in, it must, when the uterus acted, be thrown into the large orifices of the uterine veins, provided they were not secured by coagula, or by the apposition of their parietes, from contraction of the organ. He also showed, by anatomical facts, and by referring to the experiments made by Dance, that the communication between the cavity of the womb and the current of blood in the vena cava inferior was direct and easy, and that air once introduced into the uterine veins must soon be carried to the right auricle of the heart. There, if in sufficient quantity, to cause frothing of blood, aeriform distension of the right side of the heart, obstruction of the pulmonary artery, and congestion of the pulmonary capillaries. Cases of this kind had actually taken place. One had been published by Lionet, and another by Wintrich. A case had also been published by Dr. Bessems, in which air had been thrown accidentally into the uterine veins while he was injecting the uterus to arrest hæmorrhage. The woman died suddenly, with symptoms of suffocation, and the right side of the heart was found distended with air. Dr. Cormack showed, by a detail of experiments which he had performed, and also by cases, that the entrance of air into the veins, even in considerable quantity, was not necessarily fatal. A case communicated by Sir B. C. Brodie to Dr. Cormack illustrated this fact. The general treatment for uterine hæmorrhage, by inducing contraction of the uterus, also the plugging, would be the

means by which the entrance of air into the uterine veins would be prevented. Should the accident occur, and the circulation and respiration become affected, and asphyxia be imminent, it would be necessary to unload the heart and pulmonary capillaries by taking blood, following up the advantage so gained by asperation of the face with cold water, the application of stimulating embrocations, sinapisms, &c., and the internal use of various stimuli. Dr. Cormack stated that in a case which he had watched for hours after the accidental entrance of a large quantity of air into one of the veins of the neck, no advantage was got from stimuli till the heart was somewhat relieved by venesection. In some cases, little or no treatment might be required. If the air was in small quantity, it would be absorbed, if the patient survived a sufficient time, and no bad consequences might ensue. At the same time, in some animals experimented on, Dr. Cormack found that though they recovered from the immediate danger, they ultimately died from pneumonia. The cases mentioned by Dr. Simpson, in a communication to the late Dr. John Reid, and published in his collected Memoirs, were examined, and stated to belong to a different class from those of Bessems, Lionet, and Wintrich.

LIVERPOOL MEDICAL AND PATHOLOGICAL SOCIETY.

March 21st, 1850.

On the Accidental Nuclei of Vesical Calculi. DR. NOTTINGHAM.

THE author enumerated a long and interesting collection of cases, showing that bullets, and shot from gun-shot wounds—pins and needles swallowed or otherwise introduced into the bladder—portions of tobacco pipes, slate pencils, thermometer tubes, hairs, pieces of wood, of grass, and of bone, the latter sometimes introduced intentionally, at other times from disease of the pelvic bones—teeth, ivory, whalebone, elastic catheters, needle cases, leather shoe-strings, wool from gun-shot wounds, feathers, worms, hydatids, and polypi, have formed the nuclei of vesical calculi. Many of these cases would evidently be unsuited for lithotomy, the object of the author being to show the inapplicability of this operation to many cases of calculi.

Mr. HIGGINSON remarked upon this list, that the discovery of a portion of tobacco pipe in the bladder, which had been used as a catheter, had given Mr. Key the idea of using a straight sound in lithotomy. If a straight pipe could be used unpro-

fessionally, a straight sound might equally be used by a professional man if it were advantageous to do so.

Contraction of the Mitral Valves. Dr. TURNBULL.

A woman, aged 34 years, had extensive dropsy, and for some time spat up almost pure blood, which was supposed to arise from a pulmonary apoplexy, as was proved to be the case after death. She had never had rheumatism, but had been severely crushed in a crowd about three years since, from which time she had never been well.

Post-mortem.—The lining membrane of the left auricle was thickened and opaque, and the valves were also thickened, though free from calcareous deposit. The mitral valves were so contracted as scarcely to admit the tip of the little finger, a condition which had been anticipated from the murmur which accompanied the first sound, but not the second, and the physical obstruction from which had caused numerous apoplectic clots throughout the lungs.

The Bladder, Prostate Gland, and Kidneys of a patient who had suffered from Cystorrhœa. By Mr. BALMAN.

The early history of this case is recorded in the 42d vol. of the LONDON MEDICAL GAZETTE: the particulars subsequent to this are these. About two months from the date of his last illness he voided with his urine, every now and then, small particles of sand; this gradually increased in quantity, accompanied with pain, frequent desire to empty the bladder, and all the symptoms of confirmed cystorrhœa. The first specimen of his urine brought me immediately after the reappearance of the disease was distinctly acid on being tested with litmus paper, and deposited only a very fine flocculent-looking sediment. His complaint, however, soon took on a new feature, characterized by more severe and frequent attacks of hæmaturia, occurring sometimes every four or five days; the blood voided was generally in clots, and in many instances had a nucleus of crystallized sand: he always suffered much increase of pain and uneasiness prior to the discharge of these coaguli, referred chiefly to the neck of the bladder; he complained much, too, of a dragging pain in the anterior and upper part of this viscus, immediately behind the pubis, as if something were giving way; he also occasionally passed a good deal of blood by the rectum. His urine about this time presented a dark-brown and excessively turbid aspect, ammoniacal, and deposited on standing a very copious sediment, which under the microscope was found to consist of beautiful prismatic crystals of the am-

monium-magnesian phosphate, blood and pus corpuscles, and epithelial scales. From the large quantity of blood passed, especially during the latter period of his illness, I was inclined sometimes to think that there might be some fungoid or other malignant disease; but a very careful examination, both by Dr. Inman and myself, failed to detect any of the characteristic cells, the presence of which, in connexion with the loss of so much blood, would have confirmed my suspicions. I employed the same remedies that had before been so successful in the treatment of this patient, without any corresponding results: weak mineral acid injections he could no longer bear. I used also, at the suggestion of "Dr. Hoskins, of Guernsey,"* a solution of the acetate of lead, slightly acidulated with acetic acid: he could retain this with but little inconvenience, but I could not perceive that he derived much benefit from it.

I lost sight of him until the 17th of Feb., when I was again requested to see him: he was now suffering from pneumonia, involving the whole of the right lung, which quickly assumed a typhoid form, and he sank in the course of ten days. At this time Dr. O'Donnell saw him in consultation.

The body was examined 36 hours after death.—The right lung was found one entire mass of disease: on cutting into it there oozed out a brown liquid, mixed with purulent matter, marking the third stage of pneumonia: the left lung was unaltered.

On laying open the bladder and urethra, the former was found to contain about three ounces of dark foetid urine, mixed with sand; its walls were very much thickened, and the muscular fasciculi were collected into very prominent bands or rugæ; these bands were arranged in a transverse manner at the base and inferior half; at the fundus and superior part these folds had the usual reticulated or honey-comb appearance.

The left lobe of the prostate was larger, and more rounded and prominent than the right; its base, about the circumference of a half-crown piece, was flattened, and projected slightly into the bladder, the middle or third lobe presenting the appearance of an irregular oblong compressed body; its vesical extremity was abruptly pointed, and projected more into the base of the bladder

* To those interested in this subject, I would refer them to a very valuable paper, by Dr. Hoskins, on the Decomposition of Phosphatic Vesical Calculi, recorded in the Phil. Transactions for 1843; and I take this opportunity of expressing my obligation to this gentleman for kindly putting me in possession of a series of interesting and important experiments which had otherwise escaped my notice.

than the left lobe, to which it was attached by a continuous circular rim or edge: its texture was much softer than the other lobes. The right division of the gland was smaller than the left, and did not project into the bladder: between this and the third lobe was the normal vesical opening of the urethra, deviating a little to the right side, but amply large to allow of the free escape of urine.

The whole internal surface of the bladder represented by the folds before alluded to, was completely studded with calculous matter, presenting very much the appearance as if a handful of sea sand had been lightly sprinkled over some adhesive surface; the vesical and flattened extremity of the left lobe exhibited precisely the same appearance, caused evidently by the pressure of the walls of the bladder directly upon this part of the gland during each act of micturition.

A section of the prostate presented nothing unusual in its structure, nor was there any appearance of ulceration; a small abscess was seen in the upper part of the walls of the bladder, and freely communicating with its cavity; highly vascular, and had something of a gangrenous look before being washed.

The kidneys were large and flabby; the cortical substance was congested, but was in all other respects healthy.

The chief peculiarities disclosed by the scalpel in this case were the very irregular enlargement of the prostate, and the extension of the third lobe into the bladder: without having the effect of much impeding the escape of urine, its operation must have been not the less injurious, as pressing as it must do upon the most sensitive part of the organ when empty, it would act almost as a perpetual irritant; and was therefore in all probability one reason why all our remedial means and appliances proved abortive.

The blood which he constantly passed a little before death came doubtless from the vicinity of the abscess, and that passed previously from rupture of small blood-vessels by the friction of such a mass of concrete matter as we found floating in and encrusting the bladder. The absence of any traces of ulceration in any of the most depending parts of the bladder, and the appearances above mentioned, tend to justify the safety of the practice of introducing solvents for calculi into the living bladder, and the very slender probability of their removal being accomplished, when considerable, by medicines acting through the medium of the stomach.

The condition of the kidneys strengthens the view I formerly took, that the urine in this case was not secreted alkaline by the

kidneys, but was the result of decomposition in the bladder; for it can hardly be believed that ammonia should prove so prejudicial to one mucous surface, and have little or no effect on another—associated so closely as these organs are in separating from the blood one of the most complex and important fluids of the animal body.

Puerperal Convulsions. DR. WHITTLE.

Dr. WHITTLE, in bringing forward this case, had no intention of imposing on the Society an elaborate paper upon a subject with which the profession were now, on the whole, tolerably familiar, but he considered this case as being one of unusual interest, and hoped that it might lead to a discussion which would elicit from the more experienced members of the Society practical facts and valuable opinions. He regarded this case of peculiar interest from its occurring at so early a period of gestation as the sixth month. In many of the standard works on midwifery we find cases of convulsions mentioned as occurring during the period of child-bearing, previous to the full term of gestation being completed, and recurring from time to time up to the period of parturition; but these were cases of convulsions occurring incidentally in women of hysterical temperament, or of epileptic or apoplectic constitution, perhaps in some measure owing to uterine irritation, but withal very distinct from true eclampsia parturientum, i. e. convulsions directly owing to the presence of the child or fetus in utero, and persisting obstinately until the uterus becomes free from its now obnoxious contents. He considered these cases important with respect to prognosis, the great difficulty of dilating the os uteri and effecting delivery adding very much to the gravity of the case. He had met with such a case once before, which ended fatally, the uterus expelling its contents when the woman was moribund. The brain was very much congested, and some fluid was found in the ventricles:

Mary Miller, *ætat.* 20, January 13th, 9 A.M., found labouring under an attack of puerperal convulsions; had had several since 6 A.M., at which hour they began. She was bled to $\frac{3}{4}$ vi. Cold affusion was applied; was a little relieved, and very much reduced by the bleeding. Nevertheless the fits continued, recurring about every half-hour. In the intervals had very loud stertorous breathing, and then profound coma. Sinapisms were applied during the day, and brandy and water given; strong turpentine enemata, and a scruple dose of calomel, were administered. Her labour made no advance all day.

12, midnight.—Coma gradually becom-

ing more profound; swallows with great difficulty; pulse weak, 100; feet cold. It was determined to cup to relieve the brain, and 3ij. of blood were abstracted from the nuchæ (though her whole appearance at this time indicated an early dissolution). She was very low after, but now muttered incoherently, and was able to swallow better. A blister was applied to the nuchæ and to the head; hot bottles to the feet, and brandy given freely.

14th.—She appeared moribund; the os was now dilated a little. He expected that the uterus would expel its contents, and that she would then expire.

12, noon.—Labour pains now pretty strong, the fits still continuing: she was delivered by turning the fœtus; three quarters of an hour after, the placenta was extracted from the vagina. The fits now returned, but she lay almost lifeless; she was surrounded with bottles of hot water; a large blister was applied between her shoulders, her head shaved, and ice kept applied to it, and repeated doses of calomel were given until she was freely purged.

15th.—Could speak, and take a little broth, but continually turned about and muttered incoherently; had never slept. Calomel and opium were now given, and a dose of morphia at night. A large blister was applied to the calf of each leg, and tartar emetic ointment rubbed into the scalp.

16th.—She appeared a little better; could now answer questions, but talked very incoherently.

17th.—This day there was some degree of reaction, but she was excited, and her eyes suffused: she was cupped again to 3ij., after which she became composed. Calomel was continued until her gums were touched. She finally recovered gradually, but completely.

He thought this case encouraging in its results, as the whole artillery of medicine had been plied most unsparingly, and to a case which he regarded as quite hopeless, and yet the success was complete and most gratifying. Notwithstanding, he was still of opinion that cases of eclampsia occurring at this early period of gestation almost always ended fatally, from the great difficulty which always existed of effecting timely delivery.

Dr. IMLACH related two cases of convulsions occurring about the same period of gestation; one ended fatally, the other recovered, though not treated so actively as the case related by Dr. Whittle had been. He thought, generally speaking, that puerperal convulsions seldom ended fatally. He thought Dr. Churchill had given a complete history of such cases.

Dr. WHITTLE had never met with a case

of puerperal convulsions occurring at the full period of gestation which had not ended well. The difference in these cases consisted in the impossibility of effecting early delivery, and thereby giving timely relief to the brain, opposed as it was by the continually recurring attacks of convulsions. Dr. Imlach's experience bore out his statement as to the uncertain prognosis; for now, out of four cases two had ended fatally,—as far as it went, a very high rate of mortality as compared with puerperal convulsions in general.

ACADEMY OF MEDICINE, PARIS.

April 2, 1850.

The Functions of the Muscles of the Face studied by the aid of Galvanism.

M. DUCHENNE, of Boulogne, transmitted a second note, containing the following conclusions:—

1. The *pyramidalis nasi* is the antagonist of the *frontal*. 2. The *frontal* draws the integuments of the eyebrows and forehead from below upwards. Its action expands the countenance, and gives the expression of doubt and reflection; or by still greater action, combined with that of others, it expresses surprise or fright. 3. The *auriculares* enlarge the external auditory passage. 4. The *tragus* diminishes the transverse diameter of the vestibule of the external orifice of the meatus auditorius. The *antitragus* contracts the circumference of the concha. These two muscles protect the ear from the effects of the too violent impressions of sound. 5. The muscles of the helix increase the concavity of the external ear.

ACADEMY OF SCIENCES, PARIS.

April 1, 1850.

Physiological Researches.

M. ISIDORE GEOFFROY SAINT-HILAIRE transmitted, for M. Tremaux, a letter on the different races of men and animals in Sennar and Bertha, in which confirmation was given to the generally observed law that the degree of domestication of animals, and the number of their varieties, are in proportion to the degree of civilization of man.

M. SEDILLOT stated that he had successfully performed a second operation of *staphyloraphy* by the method which he had recently brought under the notice of the Academy.*

* M. Sedillot appears to have borrowed his views on this subject from Professor Fergusson, of King's College.

M. DUBOIS-RAYMOND, of Berlin, presented a note on his researches on the electric current in the muscles of living man at the moment of contraction; reserving his general results for a future communication.

SURGICAL SOCIETY OF PARIS.

April 3, 1850.

M. DANYAU read a report on an essay by M. F. Martin, on Relaxation of the Bones of the Pelvis, and its Treatment by Metallic Girdles. The report approved the essay, and recommended its publication.

M. GIRALDES presented a polypus removed from the nasal fossæ of a patient under his care. The operation had been extensive, and attended with considerable hæmorrhage. The patient died shortly afterwards, labouring under gangrene of the lungs. M. Giralde, however, attributed death to the effects of the operation. M. Chassaignac did not concur in this opinion.

BIOLOGICAL SOCIETY OF PARIS.

Monthly Summary.—January 1850.

PRESIDENT, M. BAYET.

On the Correlation existing between the Development of the Uterus and that of the Mamma. By M. CH. ROBIN.

THE author, after describing the secreting structure of the mammary gland when in its state of functional activity, contrasts therewith the anatomical characters of the organ when the period of lactation has passed. Its tissue then becomes dense, homogeneous, whitish, and firm. The yellowish or reddish granules, constituting the *acini*, are no longer seen. Under the microscope, the glandular *cul-de-sac* tubes are found to have become atrophied, and they can only be detected by the aid of acetic acid. These conditions correspond with the developed, or with the undeveloped state of the uterus. The glandular structure of the breast is distinct in about the third month of pregnancy; and it equally becomes evident when a tumor is the cause of the development of the uterus; the *acini* and tubes are then excited into a state of activity resembling that of approaching lactation, and again become atrophied on the subsidence of the uterine development. This correlation is so regular that the development of the secreting structure of the mammary gland may be regarded as a certain indication of a normally or pathologically developed uterus. The only exception is the presence of cysts

in the mammary gland itself: these determine a developed state of the glandular structure of the breast without influencing the condition of the uterus.

Union of the Spinal Cord.

M. BROWN-SQUARD reported the reunion of the structure of the spinal cord in a pigeon. Three months after the division of the cord it was found completely reunited. M. Follin stated that the union had taken place by means of a greyish substance, and that examined microscopically the nervous structure was present in smaller proportion than in other parts of the cord. The restoration of the functions of the cord had been imperfect.

Loss of Sensation without Loss of Movement in a Case of Spina Bifida. By M. LEBERT.

The patient was a boy, six years of age. The tumor was seated over the two first lumbar vertebrae, and was exquisitely painful to pressure. This child was able to walk to the hospital, but his lower extremities, to the extent of two thirds, were so completely insensible that boiling water poured upon the feet blistered the integuments without the patient being conscious of the accident. After death no change was found to have taken place in the cord: the tumor consisted of a dilatation of the membranes, with an external layer of adipose tissue.

Origin of the Facial Nerve below the decussation of the Pyramids—the anatomical explanation of crossed paralysis of this nerve.

M. JOBERT DE LAMBALLE observed that the doctrine of the decussation of the fibres of the pyramids, as taught by Gall, seemed open to many fatal objections, one of which was the fact that while paralysis is direct, as regards the trifacial and motor oculi nerves, it is crossed as regards the facial. The author claimed the merit of having traced this nerve lower down, and thereby explained this pathological fact, and the apparent contradiction in Gall's doctrines.

Tubercle in the Urinary Organs.

In a patient in whose lungs and mesenteric glands extensive tubercular disease existed, the left kidney, ureter, and the bladder, were found to be the seat of tubercle. The substance of the kidney when opened discharged a large quantity of seropurulent liquid mixed with caseiform detritus, and of the tubular structure of the gland. The pelvis of the kidney and the ureter were also distended with tubercular matter. The microscope detected tubercular matter also, disseminated throughout the glandular structure.

Extraordinary Nervous Affection in a Child.

M. LEBERT related the particulars of the case of a lad of twelve years of age, in whom sudden paroxysms of convulsive movements, with total unconsciousness, occurred. After violent spasmodic movements of the muscles of the limbs and face, the patient would throw himself down, and for three minutes at a time roll over longitudinally from one side of the room to the other, and in different directions. He woke from these paroxysms with the stupid air of an inebriated person. M. Brown-Sequard observed that this example controverted the theory of Henle, that such cases are the result of a vertigo consequent on convulsive movements of the eyes. In the instance under consideration the eyes were fixed and staring.

On the Period at which the Sequestrum should be extracted, in cases of Necrosis.

M. MAYOR, of Geneva, submitted observations on this subject. The following conclusions were laid down:—1. That the sequestrum is always detached from the living bone in from four to eight weeks from the commencement of the disease; 2. That it is unnecessary to wait for its mobility before extracting it; 3. That the operation ought always to be performed before the periosteum has formed the new bone; and certainly before the process of ossification is complete; 4. That where a member has only one bone, the application of an apparatus for extension and counter-extension will prevent shortening of the limb.

Supernumerary Fingers.

M. CAZEAUX stated that he had removed from the internal border of the left hand of an infant, a growth resembling the last joint of the little finger, and furnished with a nail on its dorsal aspect. A small wart-like growth of the same form was seen at the corresponding point of the right hand.

THE PRACTICE OF ABORTION AT NOTTINGHAM.

AN inquest was recently held at Nottingham on the body of Ann Tollington, a single woman, aged 27, whose death was alleged to have taken place as a result of criminal abortion.

Martha Duro, wife of Francis Duro, of Kidd Street, said she was a midwife; had been so thirty years. She had known deceased about a year and a half. She knew deceased was pregnant before she left. Deceased used to take various drinks for the purpose of killing the child. On

the 18th of March she was fetched to see deceased about 5 o'clock in the morning. She found her ill, shaking all over her body. She attended upon deceased during her confinement. The child, when born, was dead. She then observed a hole in its head. Deceased told witness she had been to a woman, and that the operation was done with a wooden skewer. Deceased told her that she had gone four months and a fortnight, but she would never tell witness who had operated upon her.

Samuel Wragg, of Kidd Street, said that he knew deceased. On the 16th of March last, deceased came to his house; and, on remarking that she was unwell, she said she had been to be pricked. Witness said, what do you mean? Deceased replied she had been into James's Street to see a woman, who took her up stairs, and put her against the bed-post. The witness here described what followed. That operation deceased said had been performed three times. Witness was led to make the observations from curiosity, having heard Sansome's trial last summer assizes. That was all that passed between the witness. Saw her when she was ill in bed, but had no conversation.

Elizabeth Duffin, wife of William Duffin, of Bond Street, Mansfield Road, said, on the 30th of March she was fetched to the house in which deceased was lying dead. She was related to deceased. When there, a communication was made to her by a little girl as to where deceased had been to have some operation performed on her, and was told where the house was, and went in company with Ann Dexter. She did not know the woman before; said she had been the death of witness's niece; her name was Miller. She told witness that she knew nothing about it; but on witness pressing her, she said a young woman living in Kidd Street had been to her house, and that she (Mrs. Miller) had operated upon her. She asked witness to forgive her, and she would never practise any more.

Mr. Worth, surgeon, who had made a post-mortem examination of the body, was of opinion that deceased had died from peritoneal inflammation of the womb, which had been produced by the discharge of matter from an abscess on the ovary.—Verdict accordingly.

. Was not the criminal manipulation with the skewer the real cause of the fatal peritonitis? It appears to us that there were sufficient grounds to return a verdict of murder or manslaughter against the woman Miller.

Correspondence.

ON THE SANITARY STATE OF THE METROPOLIS, AND SUGGESTIONS FOR ITS IMPROVEMENT.

It was well observed by the acute and learned Addison, at the commencement of the last century, that "lookers-on often discovered blots which are apt to escape those who are engaged in the game." Although I am no professional engineer or architect, I trust it will be permitted to me to suggest a scheme for conducting to the health and beauty of the metropolis of the richest and most powerful nation in the world.

When I look upon the rapid increase of the population of London, and consider the easy and swift communication to it from all quarters by the means of railways, I conclude that in a century hence, instead of its having, as at present, a population of two millions and a quarter, it is most likely to possess a population of five millions.

From what I can learn, it appears perfectly evident that the vested rights and the conflicting interests of London itself will prevent any substantial and efficacious sanitary measures being carried into effect, to render it what it really ought to be—a salubrious locality. It is evident enough what London really is: I will now endeavour, as briefly as possible, to explain by what means it might be reclaimed from its impure abominations.

I would do with London as Cyrus did with Babylon: as he diverted the Euphrates, and swept round Babylon, so would I, at the proper place, west of London, divert the course of the Thames by two broad deep canals, to run north and south of its present bed, sweeping round London on each side, carrying them into the Thames again at the proper place below, so as not to interfere with the docks or shipping. On each side of these canals let there be spacious promenading quays or terraces; and let the canals be made square, and paved with large dressed stone blocks, to prevent accumulations of mud and filth. At a proper distance below the ingress of the Thames into these canals I would have a stupendous lake to each, to form reservoirs to supply the metropolis with water: the water pipes from which could be carried along the terraces or quays. To prevent the current water of these canals from being polluted I would have a number of iron tunnels of large calibre to run under these quays for the collection of the sewerage: each district to

possess its own tunnel, and these tubes to be laid under a road running laterally with the canals, so that their contents would be constantly discharged at a proper place east of London, to be carried into the sea, or shipped off for manure.

The country possesses an army of navvies of two hundred thousand strong, whose operations on railways must partly cease sooner or later. It would be a public benefit to have such men employed in executing the work that I have proposed: beginning at the egress from the Thames, working upwards, and by means of temporary railways laid at the bottom of the canals, carry away all the excavations to the low lands east of London. By the same means all the requisite building materials could be carried upwards. It will be perceived that the whole work would be dry work until nearly completed. A terraced ornamental mound or island might be left in the centre of each lake, which would improve the currents through them, and at the same time consume a great part of the excavations in their construction. When all these works I have sketched out were finished, I would then do as Cyrus did, open a proper sluice from each lake to the Thames. The consequence of this proceeding would be, to lay bare the mud banks on each side of the Thames, which filthy accumulation of ages I would have, with the greatest expedition, dispatched by the aid of lighters, conveyed by steam tugs, into the sea, or shipped off for manure. I would then, from London Bridge upwards, build broad and spacious quays on each side of the river, to run as far up as might be deemed necessary, which would contract the present bed of the Thames. I would have water-pipes and sewerage tunnels laid for each district, similar to those I have described for the quays on the canals. I must now confess that I have arrived at the greatest difficulty of my project—that is, to dispose of the sewerage of these tunnels: I can only suggest that large closed tanks should be made under the lower part of the quays, and their contents constantly pumped off by the aid of steam engines into ships adapted for the purpose, and conveyed away for manure.

It will be obvious the advantages that would be gained by the accomplishment of this extensive plan. In the first place, there would be three comparatively pure running streams through London, instead of the present gigantic cesspool, which is tossed to and fro by every tide, spreading its foul emanations all around. Of all animals the swine possesses the finest sense of smell, yet it delights to wallow in the mire. One would think that many people in London, with all their refinements, de-

lighted to do likewise, with this exception, that they are not prone to do so in the gross state of the corruption, but in its gaseous essence, which is the most deleterious of all. I can imagine a person with an acute sense of smell entering London from the pure air of the country, and exclaiming:—"Behold here is the pestilence that walketh in darkness, and the destruction that wasteth at noon-day."

I can speak from long experience and observation, that the poisonous exhalations from filth do not proceed from animal matter alone, or from vegetable matter alone, but from the combination of both, exposed at and above a certain temperature. All drains ought to be tubular, and, if possible, glazed inside; and made of such materials that vermin could not penetrate them. It is for these reasons I have proposed iron tunnels for carrying away unceasingly the filth that is constantly produced in populous towns: the current water that must necessarily pass through them will not only keep them clean, but would in some degree, but not entirely, prevent the ascent of any poisonous exhalations through sinks into dwellings: from this dire calamity millions suffer in health, and thousands of lives are annually lost from the perfect ignorance of the necessity of ventilation of drains.

In the second place, I have planned for an abundant supply of water for London's immense and increasing population; I have also projected spacious and extensive promenades on each side of running streams, for the ventilation, exercise, and enjoyment of all classes of society, both rich and poor.

I would leave the improvements and carrying out the practical details of this plan to engineers and architects, who are at present so famous in this country; and, considering the extensive sites facing these quays for the erection of stacks of buildings and mansions, with numerous bridges, they would have a grand field for exercising their talents and ingenuity.

The amazing quantity of stone that would be required in the execution of these works might suggest a difficulty. I can only say that the banks of the river Esk alone, in the North Riding of Yorkshire, could supply a sufficiency of stone (by water conveyance) to accomplish all the works I have named, in dressed blocks of one to six tons weight. As an example of the truth of this statement, the magnificent piers of Whitby have only to be examined, which have been erected from that locality, and bravely do they withstand the dashing waves of the German Ocean.

Under the auspices of Royalty, and with the sanction of the Legislature, I doubt not but a company could be formed to produce

sufficient capital to carry out this scheme in the most munificent manner, and, at the same time, pay such interest as would cause it to be considered a desirable investment. This company might be designated "The Sanitary Metropolitan Company." When we have just seen a loan for a foreign state of five and a half millions subscribed for in a few days, to pay about 5 per cent. interest, I do not think there could be any great difficulty in raising any amount of capital that was more likely to pay 10 per cent. in perpetuity, and this to be guaranteed by an assessment of two and a quarter millions of people.

I hold it as an inviolable principle that no parties possessing vested rights and interests ought to have those rights and interests tolerated or perpetuated which have a tendency to injure the health or shorten the lives of their fellow-creatures; at the same time, justice and equity require that those rights and interests should receive compensation for privileges granted to them at a time of perfect ignorance of sanitary laws. I would balance with these parties, by allotting them equivalents in shares in the scheme I have proposed.

Finally, I would earnestly urge upon the aristocracy of these realms the exceedingly great benefit they would obtain for themselves and their families by their sojourn in a properly purified and improved metropolis; and I would emphatically express to them, in addition to the old axiom of "no wealth can be enjoyed without health," that the finest constitutions may be undermined by residing for a length of time in an impure and pestilential atmosphere.

I am, sir,

Your obedient servant,

GEORGE MERRYWEATHER, M.D.

Whitby, Jan. 22, 1850.

TREATMENT OF MEDICAL OFFICERS DURING CHOLERA BY J. PEARSON, M.D., EDIN., SURGEON TO THE MARYPORT DISTRICT OF THE COCKERMOUTH UNION.

SIR,—The injustice of Boards of Guardians towards medical men is so well known, and so universal, that Poor-law injustice has become almost a proverb with the profession, nor has their treatment of the medical officers during the late cholera epidemic tended to allay this feeling; but on the contrary, has, if possible, increased it, and certainly not without reason, if I may estimate the conduct of the Boards of Guardians of other unions by that of the one under which I hold an appointment. Nothing could be conceived more unjust,—I had almost said dishonest,—than that, after an officer has contracted to perform cer-

tain duties for a fixed sum (and that the very lowest) he should, without extra-remuneration, have other responsible duties thrown upon him, of which he knew and could know nothing, when he made the contract. This, however, has been done by the guardians, to the medical officers. Under the Nuisances Removal Act they have required duties which were not specified in the order of the Commissioner, which we were led to believe comprehended the amount of duty which would be required of us. Nor is this all; but they have demanded duties upon the performance of which the preservation of their own lives depended equally with the lives of the paupers. If, indeed, these duties had been for the benefit of the pauper alone, they might with some show of justice have been required of the medical officer of the poor; but when they benefit the rich as well as the poor, it is but just that the former should pay a fair remuneration to those of whom they require such duties. Having applied to the Poor-law Board on the subject, they sent me the copy of a letter they had received from the Board of Guardians, in which it appears that the reasons (if such they can be called) they assigned for not granting extra remuneration were, in the first place, that I had never made an application to them on the subject; and in the second, that they would have granted me assistance if I had applied for it. With regard to the first objection, it appears the subject was brought before the Board in consequence of the medical officers of another district applying for extra remuneration, when one of the guardians for Maryport, without my knowledge, urged upon the Board the justice of remunerating me for my extra services during cholera; and in this he was supported by the rest of the guardians of this town who were present, and who were consequently conversant with the amount of duty I had been called upon to perform; but notwithstanding this, the majority of the Board resolved not to pay any one for extra services. I need not say it would have been folly after this to have made an application to the Board of Guardians. Consequently I appealed to the Poor-law Board, who, after corresponding with the guardians on the subject, informed me that they had no compulsory power in the matter. With regard to the second, I may state that, though there had been scattered cases of cholera in the town for some time previously, the day before the outbreak I had only two cases; whereas, on the following day, I had ten deaths: thus rendering it quite impossible for me, having such a number of cases to attend, to send eight miles, call a meeting of the Board of Guardians, and get an assistant appointed. But

what folly to urge such frivolous pretences as these as excuses for what every honest man must acknowledge an act of injustice; but they are in keeping with the character and general tone of the letter.

Such is the unjust position in which the medical officer is placed: nor can we expect it to be otherwise, so long as those who are to pay are allowed to fix the amount. Nothing can be more preposterous than to expect that Boards of Guardians, as at present composed, should be able to appreciate, or willing to form a just estimate of the value of professional services. Of what benefit, then, is art. 172 of the consolidated order to the medical officers? for, if the guardians have refused to recognise such services as were rendered by the medical officers under the Nuisances Removal Act, and in treating the late cholera epidemic, as extraordinary services, we may take it for granted that the guardians (of this union at least) are determined never to grant more than the law will compel them to pay.

I now proceed to the enumeration of my duties for the quarter commencing Sept. 21st, and ending Dec. 21st, 1849. Total number of cases, 136; salary, £8. 15s., or 1s. 3½d. per case; of these, one at a distance of four miles was under treatment all the quarter; one for injury of the spine, at a distance of three miles: having retention of urine, I was compelled to visit him twice a-day for a considerable period. Besides these, I had numerous patients at great distances from the town, the farthest being ten miles.

Total number of miles travelled in the country 489, which, taking all the salary, allows 4½d. per mile.

Total number of visits in town and country, 866, or 2½d. per visit, including travelling expenses and medicine, except for the period of a fortnight during cholera, when, being unable both to visit and dispense medicine, this latter was paid for out of a fund raised by the inhabitants of the town at a cost of about £8. The above are the number of cases I have entered in the parish book; but during the prevalence of cholera I prescribed for numerous cases of diarrhoea which I had not time to record; for, not expecting for a moment to meet with the unjust treatment I have since met with from the General Board, I intimated to the Local Board of Health my willingness to attend to all who applied, whether they had the necessary order of the relieving officer or not.

When what I have received for three months is compared with what was paid to the druggist for the supply of medicine for two weeks, we may form some idea of the justice or injustice of the decision of the

guardians. The one receives £8 for medicine only, whilst I have received £8. 15s. not only for medicine for eleven weeks, but I have also given that professional knowledge which it has cost me so much money, time, and labour, to acquire; and added to this, I have exposed my life in those dens of wretchedness where a disease like that of cholera is rendered still more terrible, and the danger of infection fearfully increased by the filth and poverty by which it is surrounded. Still, however, the guardians of the Cockermouth Union say I have not done enough for what I receive, but demand, besides all this, that I shall give my time and professional knowledge to protect themselves from disease. Before dismissing the subject, I willingly bear testimony to the liberality with which the inhabitants came forward to alleviate the sufferings of the poor; but, at the same time, I would caution them not to forget the lesson cholera has, or ought to have taught them; for they may rest assured that, though it may have disappeared for a time, it will almost as certainly return at some future period; and I would point to the mortality of one small street to demonstrate what may be the fate of every street in the town, if allowed again to lapse into the filthy condition it was in three years ago, when fever caused such a frightful mortality. They can for the future expect nothing from the General Board of Guardians, but must (as in the late epidemic) rely upon their own exertions.

Marjory, April 2, 1850.

Medical Intelligence.

MEETING OF THE NATIONAL INSTITUTE OF MEDICINE, SURGERY, AND MIDWIFERY.

A SPECIAL general meeting of members of the profession was held at the Hanover Square Rooms on Thursday, the 11th inst. There were present several gentlemen from distant parts of the country, but the meeting, considering its nature and objects, was on the whole but thinly attended. Mr. Clifton was called to the chair. Having expressed his opinion that all hope of reconciliation with the Council of the College of Surgeons was at an end, he requested Mr. Ross, the Secretary, to read the Report from the Council of the National Institute on the Medical Reform question.

Our readers must be familiar with the principal topics to which the report refers, as it embraces the attempts at medical legislation which have been made during the last five years, with the various causes of

failure. It was stated that the principles of the National Institute were based on those of the National Association.

More than four thousand general practitioners in the metropolis and the provinces had already subscribed their adhesion to those principles; and since this was the largest number of practitioners that had been enrolled in support of any course of policy that had hitherto been offered to the profession, the Council felt justified, on the simple ground of a numerical calculation, in adopting principles that appeared to be so universally acceptable.

The general result of the various interviews held with the Council of the College of Surgeons was, that the latter body would consent neither to a liberal enfranchisement of the members, nor to the right of a general practitioner to a seat in the Council. The Council of the Institute have always regarded these points as essential to any satisfactory adjustment of the medical question; for, whilst the franchise is limited to a small number of voters, and the Council is exclusively confined to those gentlemen who, as consulting surgeons, have distinct and often opposite interests to those of the general practitioners, the latter could have no security in the maintenance of a high standard of qualification for members of their own order, upon which alone the respectability, efficiency, and status of their class must depend. Whilst general practitioners are excluded from the governing Council, the possession of the franchise by the members, to whatever extent it might be conceded, would be a nullity. The power to elect none but pure surgeons to the higher offices of the College, would be a delusive concession to the demands of the members, for whilst it could give no protection to the members, it would tend to augment the influence of the governing body, by appearing to invest their authority with the sanction of a popular election. The Council reiterate their opinion, that the elevation of the general practitioners in social estimation, and their usefulness to the public, depend upon the maintenance of a high standard of professional qualification, which the experience of past years evidences beyond all doubt can be accomplished only by placing the control of the education and examination of candidates for general practice in the hands of members of their own class. This is a proposition to which the Council of the College of Surgeons have avowed their repugnance, and the Council of the Institute have, therefore, no hope that the College of Surgeons will be modified to an extent sufficient to embrace their views.

There are other interests, however, that must be considered before any scheme of

general legislation can be arranged. The Society of Apothecaries, acting under an Act of Parliament, are armed with penal powers for the suppression of illegal practice; and the profession would strenuously resist any attempt that might be made to weaken or abrogate powers that might be wielded with so much advantage to the interests of the legally qualified practitioner. The other institutions are disposed to abolish the functions of the Apothecaries' Society, but they have shown no willingness to accept the penal powers now exercised by this Society; on the contrary, they have been hitherto averse to the maintenance of legal restriction on unqualified practice. The Council believe that the profession will never consent to the Society being superseded at the sacrifice of so important and valuable a safeguard of their professional privileges; and on the other hand, the Society, for itself, will not consent to lay down its authority, unless it be made over, intact in all respects, to a body more capable of making it efficient. There is, then, no expectation that these valuable powers can be preserved, except through the medium of a new and independent college. A liberal and comprehensive plan of legislation must also provide for all those gentlemen in general practice who are not members of the College of Surgeons; and the Council have reason to believe that the Government would not entertain any proposition that did not embrace all classes of the profession, and place them upon a footing of equality in their respective Colleges. For these various considerations, which originally influenced the decisions of the Committee of the National Association, and subsequently the Council of the Institute—considerations which no act of the Council of the College of Surgeons has yet in any degree weakened, the Council still earnestly recommend the profession to contend perseveringly for a new and independent incorporation for the general practitioners, with full powers of controlling the education and examination of candidates for admission to their class, as the only certain means of introducing harmony and order into the profession, of obtaining a free exercise of corporate rights for the general practitioners, of promoting their respectability, and enhancing their efficiency and usefulness in their ministrations to the necessities of the public.

After some slight opposition on the part of one member, the report was received and adopted.

A memorial on medical legislation, of which we have elsewhere given a copy, was then brought forward as a resolution, by Mr. Bowling. The great feature in this memorial is contained in the last paragraph,

to the effect that the general practitioners of England and Wales should be incorporated as a new and independent College under a Royal Charter to be granted by her Majesty.

Mr. BOTTOMLEY, in moving an amendment, spoke a plain, but apparently unpalatable truth, when he said that we have already institutions enough. He considered that a modification of the rules and by-laws of the College of Surgeons would meet the wishes of the majority of practitioners in the United Kingdom.

The meeting was addressed by various speakers on the resolution and amendment, and on a division the resolution was carried.

A deputation was appointed to wait upon Sir George Grey, and to present to him the memorial.

Petitions to both Houses of Parliament, embodying the principal points of the memorial, were also agreed upon, and the meeting separated.

MEMORIAL ON MEDICAL LEGISLATION ADOPTED AT THE HANOVER SQUARE MEETING.

*To the Right Hon. Sir George Grey, Bart.,
Her Majesty's Principal Secretary of
State for the Home Department, &c. &c.*

THE memorial of the General Practitioners in Medicine, Surgery and Midwifery, of England and Wales, adopted at a public meeting of the medical profession, held at the Hanover Square Rooms, Hanover Square, April 11th, 1850, sheweth,—

1st. That your memorialists are legally qualified members of the medical profession, and are general practitioners in medicine, surgery, and midwifery.

2d. That nine-tenths of the medical profession in this country belong to the class which your memorialists represent, and that they are of necessity the ordinary professional attendants of many members of the aristocracy, and of by far the greater proportion of the middle classes of society, and that, with the solitary exception of the metropolitan charities, they may be considered the exclusive medical attendants of the labouring population in town and country.

3d. That the necessities of this large proportion of the population demand that the general practitioners should, as a class, be fully competent to practise medicine, surgery, and midwifery, not only in ordinary cases, but also in every emergency; and that, under a judicious administration of the Act of 1815—the only legal authority by which the education and examination of the general practitioners has (have) been regulated during the last thirty-five years, notwithstanding the imperfections and limitations of that act, the competency

of the general practitioners, in every branch of medical practice, has progressively and steadily augmented.

4th. That the general practitioners of this country respectfully, but firmly, assert their right to direct the education of their own class, and to institute examinations of the competency of individuals intended for general practice, and to manage and control their own affairs; and that they view with the greatest possible alarm every proposal to deprive them of that right, and thereby of the power of sustaining and elevating their standard of education and qualification, in accordance with the present rapid advancement of every other department of science and art.

5th. That the general practitioners would regard not only the abrogation of the present privileges under the Act of 1816, by virtue of which they have obtained their present position, but the continuance of the limitations and restrictions at present imposed upon them, in the education and qualification of candidates for general practice, as a deplorable result of the long agitation of the question of medical reform, and that no settlement of the question on such a basis could prove final.

6th. That upon every occasion when it has been proposed to entrust the education and examination of the general practitioners to the Colleges of Physicians and Surgeons, the general practitioners have almost unanimously objected to such an arrangement, on the ground that they are refused any participation in the rights and privileges of those Colleges, and that those Colleges have indicated their disinclination to admit either the necessity or expediency of a high standard of qualification for general practice; and in particular, that the College of Surgeons has employed its influence in the direction of limiting the qualifications and degrading the character of its members, the vast majority of the surgeons of this country—for the advantage of the fellowship comprising a very small minority—as instanced in the recent reduction of the age of admission of members from twenty-two to twenty-one years, while the education for the fellowship is continued until the age of twenty-five years.

7th. That as respects surgery, the most serious attention of the Right Hon. the Secretary of State for the Home Department is respectfully called to the fact, that at the present moment, throughout this country (which is computed to contain between three or four millions of poor), this large proportion of the population is professionally attended and operated upon in all the most severe and dangerous surgical cases, under the orders of the govern-

ment, by members of the College of Surgeons, whom the Council of the College, by their public acts and declarations, regard as having been educated to meet the *ordinary exigencies* of practice only, notwithstanding every one of those members have (has) fulfilled all the requirements of the College authorities.

8th. That such declaration of the Council of the College of Surgeons, that the members of the College have been educated for the ordinary exigencies of surgery only, is virtually a charge of incompetency, and as respects the great body of surgeons, an unjust calumny; and the College authorities have no other justification for such an erroneous assumption than their own acts, the policy pursued by the Council having been, as heretofore recited, to limit the acquirements of the members; and your memorialists aver that the public are wholly indebted to the broad basis of scientific acquirement, and the progressive elevation of the standard of education adopted by the administrators of the Act of 1816, taken together with the individual zeal and emulation of the medical profession, for the actual high degree of surgical competency possessed by the members of the College at large; the exceptional cases of incompetency being, for the most part, attributable, on the one hand, to the policy of the College in requiring of members proofs of competency for ordinary exigencies only; and, on the other hand, to the defects of the Apothecaries' Act, by which the legal examining board for general practice has been prevented constituting a perfect curriculum of education, and an adequate test of surgical, as well as medical competency, in the examination of their candidates.

9th. That as the law punishes general practitioners for the mismanagement of surgical cases, the law should enable the general practitioners to attain for themselves as high a standard of surgical as well as medical education as practicable.

10th. That the anomalous and deplorable state of the laws generally, which at present affect the medical profession, and the defects necessarily resulting from the special character of the existing Colleges, together with the vast and daily increasing number of persons practising the profession without conforming to any of its legal provisions, calls (call) for the interposition of a paternal government, and renders (render) speedy legislation imperatively necessary, as much for the public interest as for the peace and well-being of the profession.

11th. That a vast majority of the profession—the general practitioners—from the absence of any bond of union, or legally authorized executive to represent them, have for many years past been placed

in a position of the greatest embarrassment and humiliation, and that owing to this radical defect, and the want of a sufficient controlling power over the executives of the existing medical corporations, they have hitherto been unable to obtain a recognition of their rights and privileges, or protection from illegal and unprofessional practice—privileges which they deem essential to the welfare and dignity of the profession.

12th. Your memorialists, in conclusion, for these and divers other cogent reasons, most respectfully urge, that Her Majesty may be advised forthwith to grant to the general practitioners of England and Wales a Royal Charter, for the foundation of a new and independent Royal College, incorporating, in the first instance, all those individuals at present practising as general practitioners of medicine, surgery, and midwifery, with a representative government, and equal rights and privileges for all its members, and giving authority to regulate the education, and to test, by examination in every branch of medicine and surgery, all future candidates for its membership; and, furthermore, that Her Majesty's Government may be induced to frame and carry through Parliament, with as little delay as possible, a Medical Reform Bill for the future regulation of the medical profession, containing provisions calculated to harmonise the existing institutions with the spirit of the age, and giving effect to the new incorporation of those engaged in the general practice of medicine, surgery, and midwifery throughout the country.

NAVAL ASSISTANT SURGEONS.—PETITION OF THE ROYAL COLLEGE OF SURGEONS.

THE following important petition on the injurious results of the present mode of treating Assistant-surgeons of the Navy, was presented to the House of Commons, on the 11th instant, by Captain Boldero:

"That the Court of Examiners of the said College are required to examine into the qualifications of the assistant-surgeons of Her Majesty's navy on their promotion, and have found many who have neither improved nor effectually maintained their knowledge of the art and science of surgery. That the President and Council deem it their duty to represent further to your hon. house that the cause invariably assigned for this deficiency is the want of such accommodation in the vessels of the navy as is compatible with the requirements of study; and they are induced to believe, from the inquiries which they have made, that the assistant-surgeons of the navy are placed under circumstances which are unsuited to the position and pursuits of members of a liberal profession. That the Pre-

sident and Council, under the impression that the regulations at present existing tend to diminish injuriously the efficiency of the surgical service, and to deter able surgeons from entering Her Majesty's navy, humbly pray your hon. house to consider the grievances of which the assistant-surgeons of the Royal navy complain."

The petition was sealed with the official seal of the College. The hon. member also presented a petition from Bridgewater with a similar prayer.

MEMORIAL TO SIR G. GREY ON THE SUPPRESSION OF THE UNAUTHORISED PRACTICE OF MEDICINE.

To the Right Honourable Sir George Grey, Baronet, Her Majesty's Principal Secretary of State for the Home Department.

SIR,—The undersigned, President and Honorary Secretaries of the Manchester Medico-Ethical Association, formed for the purpose of determining the ethical relations, and supporting the interests of the medical profession, would respectfully represent to you the injury sustained by the public and the profession from the large and increasing number of unauthorised and uneducated persons engaged in the practice of medicine.

From a list recently published under the direction of this Association, it is ascertained that upwards of ninety such persons are practising in, and within twenty miles of Manchester, usurping the rights of the qualified practitioner, and imposing on the public by false pretences.

In the present anomalous state of the law the members of the profession receive no practical protection from the licensing and corporate medical institutions of the country, the attendant difficulties being found so great, partly from the incredible numbers of offenders, and partly from the expense entailed by prosecutions, as to nullify the limited powers that already exist.

Understanding that it is your intention to submit to Parliament a measure of medical reform, the undersigned earnestly pray that the bill may contain a clause to provide for the summary conviction before a magistrate of all unauthorised practitioners of medicine, since they are convinced that the abuse in question has attained so great a magnitude that no measure will be satisfactory which does not contain such an enactment.

Signed on behalf of the Association,
JAMES L. BAKSDLEY, M.D.,
President.

J. ALKENHRAID, M.D.,
W. C. WILLIAMSON,
Hon. Secretaries.

CONVICTION OF PROFESSOR J. W. WEBSTER.

OUR readers will remember that we not long since announced that Professor Webster, of the Medical College, Boston, had been accused of the foul crime of murdering Dr. J. Parkman, under circumstances of peculiar atrocity. By intelligence just received from America, we learn that, after a trial of eleven days, Dr. Webster has been unanimously found guilty by the jury, and he was sentenced to death on the 31st ult. Considering the station in society occupied by the convict, there has been no such event as this since the trial and conviction of Captain Donellan for the murder of Sir Theodosius Boughton, in 1782. The learned judge, in passing sentence on Dr. Webster, is reported to have said:—

"It has only been our province on occasions like the present to address the illiterate, the degraded, the outcast, whose early life has been cast among the vicious, the neglected, the abandoned—who have been blest with no means of moral or religious culture—who have never received the benefits of cultivated society, nor enjoyed the sweet and ennobling influences of home. To such a one a word of advice upon an occasion so impressive may be a word fitly spoken, and tend to good; but in a case like this, when these circumstances are all reversed, no word of ours could be more efficacious than the suggestions of your own bitter thoughts, to which we commend you."

It is sad to think that a man who was eminently distinguished in the United States for his scientific attainments, and who occupied a high social position among his countrymen, should have been precipitated into the perpetration of a crime at which human nature shudders, and which is generally the final act of a career of irreligion, vice, and infamy.

TESTIMONIAL TO MR. TUSON.

At a recent meeting of the medical students of University College, a purse, containing twenty-one guineas, which had been subscribed by them, was presented to Mr. H. B. Tuson, Librarian of the College, as a testimonial of esteem for his kindness and attention to the interest of the students.—[Accidentally omitted last week.]

ROYAL FREE HOSPITAL.

At the quarterly meeting of the governors of the Royal Free Hospital, Gray's Inn Road, held in the Board-room on Wednesday, the 10th instant., the report from the weekly board stated that during the previous three months 179 in-patients, and 6,408 out-patients, had been relieved; that by the recent re-opening of one of the wards (which want of funds had some time ago compelled them to close) the Board had

been enabled to adopt a better classification of patients; and that, by the continued benevolence of the public, they trusted soon to re-open the other closed ward, and thus apply an additional 50 beds to the relief of the suffering poor.

NEWLY APPOINTED FELLOWS OF THE UNIVERSITY OF LONDON.

THE Chancellor of this University has lately received a Royal warrant, appointing the following noblemen and gentlemen Fellows of that University:—The Right Hon. Lord Monteagle; the Right Hon. Lord Overstone; the Right Hon. Sir James R. G. Graham, Bart., M.P.; the Right Hon. T. B. Macaulay; G. Cornwall Lewis, Esq., M.P.; Henry Hallam, Esq.; and George Grote, Esq.—[Accidentally omitted last week.]

EXAMINATION QUESTIONS FOR THE FELLOWSHIP.

THE following questions on pathology and surgery were submitted to the senior candidates:—

1. Describe the character, progress, and treatment of traumatic gangrene.

2. Describe the nature of hæmatocele, and its treatment.

3. Describe the peculiarities of a case of strangulated femoral hernia, in relation to the diagnosis, the mode of reduction, the proposal of the operation, the several steps of the operation, the division of the stricture, and the question of opening the sac.

4. What are the diagnostic symptoms, the nature and extent of the injury, the probable result, and the treatment of fracture of the vertebral column in its dorsal portion?

5. Explain the origin, progress, and differences in hæmorrhoidal tumors, and describe their treatment.

6. What are the immediate, the consecutive, and the remote ill effects of concussion of the brain when severe? And what is the treatment of such an injury in its different stages?

Questions to the junior candidates:—

1. Wounds of arteries;—their varieties; their relation to hæmorrhage; their mode of reparation; and the operation of ligatures.

2. The pathology of the scrofulous tubercle.

3. The pathology of secondary abscess.

4. The pathology of ulceration, and the process described in hard and soft parts.

5. The signs, the consequences, and the treatment of foreign bodies in the air-tubes.

6. Amaurosis;—its signs and symptoms, its causes and pathological conditions, and the principles of its treatment.

N.B. Answers to any four of the above questions were accepted as sufficient, pro-

vided always that they were *accurate* and *adequate*.

GENTLEMEN ADMITTED TO THE FELLOWSHIP OF THE COLLEGE OF SURGEONS BY EXAMINATION.

The following members of the College, having undergone the necessary examinations for the fellowship, were admitted by the President and Council, on the 11th instant, fellows of the institution, viz.—Messrs. Geo. Gwynne Bird, Swansea, South Wales, diploma bearing date Jan. 2, 1824; Alexander Bridge, St. James's Street, Piccadilly, Nov. 13, 1835; Joseph Maclise, Russell Place, Fitzroy Square, Oct. 13, 1837; George Brown, Kensall Green, May 13, 1839; John Gregory Forbes, Devenport Street, Hyde Park, June 4, 1841; John Thomas Griffith, Peckham, Surrey, April 14, 1845; John James Halls, Down Street, Piccadilly, Nov. 27, 1846; and Joseph Thomas Clover, Aylsham, Norfolk, May 28, 1847.

ROYAL COLLEGE OF PHYSICIANS.

GENTLEMEN admitted Licentiates, Monday, March 28th:—Charles John Hare—John Clarke—James Edward Pollock—William Wadham.

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 12th inst.:—J. Little—J. W. C. Brevan—H. A. R. Allah—T. W. Caird—C. H. Roper—H. Penfold—H. J. Mayhew—J. Patient—D. Saunders—G. H. Griffith—J. B. Mountford.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 4th April, 1850:—Henry Wilson Sharpin, Bedford; Edward James Blyth, Richmond; William Walter Tinsley, Sedgley, Staffordshire; Robert Fowler, Cardigan; Lewis Paine, Great Chart, Ashford; William Dingley, Sherborne; James Thomas Hillier, Broadstairs; George Pound, Axminster, Devon; Alfred Mathias, Lamphey Court, Pembroke; Isaac Dobree Chepmell, De Beauvoir, Guernsey; Samuel Knaggs; Charles O'Callaghan, Killarney, Ireland.

Thursday, 11th April:—Henry Sacheverel Edward Schroeder, Guernsey; Thomas Leonard Barber Barwis, Penryn, Cornwall; John West Walker, Spilsby; James Vandersloot M'Cormick, Acton Street, Gray's Inn Road; Alfred Peskett, Petersfield, Hants; Frederick Martin, Clare, Suffolk; James Breach, Bradfield; Henry May Davis, Hastings; James Wilson, Lancaster; Francis Henry Plumptre, Queen's Square; Robert Thomas Buckle, Bedall, Yorks.; Reuben Whitchurch, Melton Mowbray; Alfred Hill, Walsall,

OBITUARY.

On the 10th inst., at his residence in the Montpelier Road, Brighton, deeply lamented by his family and friends, William Whitmore Stafford, Esq., surgeon, aged 50.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.42
Thermometer^a 49.5
Self-registering do.^b Max. 0.0 Min. 29.
^a From 12 observations daily. ^b Sun.

RAIN, in inches, .58.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was about the mean of the month.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, April 13.

BIRTHS.		DEATHS.	
Males....	745	Males....	459
Females..	728	Females..	434
1473		893	

CAUSES OF DEATH.

ALL CAUSES	893
SPECIFIED CAUSES	891
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	157
<i>Sporadic Diseases, viz.—</i>	
1. Dropsy, Cancer, &c.	38
2. Brain, Spinal Marrow, Nerves, and Senses	163
4. Heart and Bloodvessels	27
5. Lungs and organs of Respiration	174
6. Stomach, Liver, &c.	61
7. Diseases of the Kidneys, &c.	6
8. Childbirth, Diseases of Uterus, &c.	7
9. Rheumatism, Diseases of Bones, Joints, &c.	6
10. Skin	2
11. Old Age	48
12. Sudden Deaths	4
13. Violence, Privation, Cold, &c.	24

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	7	Convulsions.....	31
Measles.....	15	Bronchitis.....	68
Scarlatina.....	18	Pneumonia.....	72
Hooping-cough.....	35	Phthisis.....	106
Diarrhoea.....	12	Lange.....	11
Cholera.....	0	Teething.....	12
Typhus.....	37	Stomach.....	2
Dropsy.....	14	Liver.....	3
Hydrocephalus.....	34	Childbirth.....	2
Apoplexy.....	28	Uterus.....	3
Paralysis.....	24		

REMARKS.—The total number of deaths was 24 below the mortality of the fifteenth week of ten previous years.

NOTICES TO CORRESPONDENTS.

Medicus.—The other Nottingham case shall be noticed in our next.

Mr. William Smith.—The continuation paper has been received. One of those already in hand will be inserted in the following number.

Mr. Hicks's case shall be inserted as early as possible, and a proof sent.

We are obliged to Mr. Prentice for his second letter. It shall appear next week.

The communications of Mr. Hussey and Dr. F. J. Brown will be published in our next number.

Corrigendum.—In Mr. Rose's contribution, last number, page 634, col. 2, line 22, for "*vis in situ*," read "*vis insita*."

Lectures.

THE
LUMLEIAN LECTURES FOR 1850.

Delivered at the Royal College of Physicians.

By R. B. TODD, M.D. F.R.S.

ON THE PATHOLOGY AND TREATMENT OF
DELIRIUM AND COMA.

LECTURE I.

The importance of fixed principles of pathology and practice in delirium and coma—Definition of delirium—Of coma—Existing views of their pathology unsettled—Clinical history of the different forms of delirium—Epileptic delirium—Cases—Effects upon the brain—Renal epileptic delirium—Choreic delirium—Case—Hysterical delirium—Effect upon the brain—Cases—Delirium in men from overwork—Puerperal delirium—Effects upon the brain—Anæmic delirium—Traumatic delirium—Delirium of typhus—Of erysipelas—Rheumatic delirium—its complication with cardiac inflammation.

AMONG the most formidable indications of disturbance of the great central organ of the nervous system, the brain, are those states which are known as coma and delirium.

These states are so destructive of the consciousness of the patient, or pervert to so great a degree his intellectual powers, that we cannot wonder that the utmost alarm should be excited in the minds of all, whether friends or medical men, who may be in attendance upon him.

And perhaps there are few occasions in which the physician stands more in need of all that self-possession which sound knowledge is most likely to impart, than when, during his attendance upon a patient, either a delirious or a comatose state should be suddenly added to his previous symptoms.

It is then that he is forced to appeal to his former experience, to guide him in his prognosis, and to direct his practice; then, too, he is compelled to examine the grounds of his principles—to assure himself as to their soundness, and as to the safety of following the course which they indicate.

The physician of a true and right spirit is no respecter of persons; with him the duty of using every exertion to save life is the same, whether the patient be high or low, rich or poor.

saving life is the same, whatever be the condition of the individual; but in his attendance upon some patients his feelings would be more engaged than with others: and the more they are involved, the less free would be his judgment, and the more need would he have to depend upon sound and fixed principles.

On these grounds, all who are engaged in the deeply responsible duties which belong to the practice of medicine, are interested in inquiring whether, indeed, any settled views are pretty generally entertained by the best-informed practitioners with reference to the pathology and treatment of coma and delirium, and regarding the appropriate treatment of these conditions.

But, independently of all such considerations as these, it is clearly of vast importance that we should have exact views as regards the intrinsic nature of these conditions—coma and delirium.

Coma, in its most profound state, may be defined as a complete suspension of that mutual influence of the mind and of the organ of consciousness, in which, speaking physically and physiologically, our consciousness exists—a suspension which, no doubt, begins with the physical organ, and therefore involves the powers of thought and of perception, so that the comatose patient neither wills, nor feels, nor thinks, and he awakes from this state as from a deep sleep: he knows not where he had been, and he feels as if during a certain interval he had ceased to exist.

The state of delirium, in its highest degree, is a complete disturbance of the intellectual actions; the thoughts are not inactive, but rather far more active than in health: they are uncontrolled, and wander from one subject to another with extraordinary rapidity; or, taking up some single subject, they twist and turn it in every way and shape, with endless and innumerable repetitions. The thinking faculty seems to have escaped from all control and restraint, and thought after thought is engendered without any power of the patient to direct or regulate them. Sometimes they succeed each other with such velocity, that all power of perception is destroyed, and the mind, wholly engrossed with this rapid development of thoughts, is unable to perceive impressions made upon the senses; the patient goes on unceasingly raving, apparently unconscious of what is taking place around him; or it may be that his senses have become more acute, and that every word dropped from a bystander, or every object presented to his vision, will become the nucleus of a new train of thought, and moreover, such may be the exaltation of his sensual perception, that subjective phe-

nomena will arise in connection with each sense, and the patient fancies he hears voices or other sounds: ocular spectra in various forms and shapes appear before his eyes, and excite to further rhapsodies of thought.

If, then, these states of coma and delirium involve so complete a departure from the normal condition of the consciousness and intellect, and if, as experience teaches us, they are apt, one or other, to accompany diseases of organs other than those which form part of the nervous system, surely nothing can be of higher practical moment than that our views of the pathology of these states—of the precise nature of the derangement of the physiological action of the body, which is capable of producing them in their various degrees;—I say, surely nothing can be more important, practically, than that our views upon these points should be definite and settled. Such derangements as these, affecting as they do, in the most serious manner, both consciousness and the power of thought, must lie at the very foundation of our knowledge of the derangements or diseases of the nervous system.

Can it be expected that we shall be able to form any correct idea of the effects which inflammation or other disease of the brain is capable of producing, if we know nothing of the intrinsic nature of those conditions which give rise to coma or to delirium?

It may be, however, that some will say, surely there is no need for occupying time with any new inquiry into the pathology of these conditions, inasmuch as the views of practitioners upon these points are pretty well agreed. To such a remark I must reply, that it is a source of much astonishment to me, how little the views of practitioners appear to be agreed upon this subject, and to what a trifling extent these two conditions, coma and delirium, as special affections of the nervous system, appear to have been investigated by pathologists.

I have carefully looked through the literature of these subjects, and I have failed to discover anything like a full discussion of the pathology of these important affections, founded upon careful *clinical* investigations. And so far as the subject has been discussed, writers and practitioners seem to rest content with the opinion that all comatose affections and delirious states are referable to various degrees of congestion of blood in the blood-vessels of the brain, or to various quantities of fluid poured out in the sub-arachnoid cavity, or in the cerebral ventricles.

I am, therefore, not without hope, that an inquiry into the nature and treatment of these affections may be considered an

appropriate subject for these lectures, nor an unsuitable sequel to the lectures I had the honour to deliver last year upon the pathology and treatment of convulsive diseases.

I propose to consider these subjects on the following plan:—

First, I shall inquire into the clinical history of delirium and of coma,—whether they arise from disease or from the introduction of some deleterious agent into the system; and in connexion with this I shall collect what facts I can respecting the results of post-mortem examinations in fatal cases; secondly, from the facts thus collected, viewed in connexion with our present knowledge of the general laws of nutrition, and of the physiology of the nervous system, I will endeavour to deduce a view of the pathology of these affections; and lastly, I shall describe the treatment suited to the various forms of them, which is most accordant with reason and experience.

Delirium exhibits great variety as to the extent to which the perturbation of the intellectual powers has taken place,—in some instances amounting to a simple wandering of the thoughts, and an inability to fix the attention, and to maintain a continuous train of thought; in others, consisting, as it were, in an extraordinary exaltation of the thinking faculty, with an extreme excitement of feeling and temper, leading in many instances to violent maniacal paroxysms, under the influence of which the patient exhibits a degree of muscular power which is very apt to deceive the practitioner as to the extent of intrinsic strength which he possesses. So great is the difference of degree between the highest and the lowest forms of delirium—between the slight wandering, or, as nurses and patients are apt to call it, *light-headedness*, and that delirium ferox or acute mania in which the patient threatens with destruction himself and all around him,—that it may fairly be matter of question whether these two states ought to be placed in the same category as regards their pathology—whether, indeed, they may be considered as only different degrees of the same disease.

Delirium occurs under such a remarkable variety of circumstances, in such various conditions of the system, that I find it impossible to give anything like a connected view of the subject without describing the several forms of it *seriatim* as we meet with them in practice, and arranging them in the following order:—

First, I shall describe what may, I think, be properly called the *epileptic delirium*. I do not think that this form of delirium is sufficiently appreciated by practical men. It seems to me to be of fre-

quent occurrence, and that in some of those instances in which, under some sudden impulse, persons are led to commit some dreadful deed, which is opposed to the whole tenor of their previous lives, it is the sudden access of epileptic delirium which has thus disturbed the balance of their moral nature.

I shall describe the phenomena of this delirium from some cases which I have witnessed. A man, hitherto healthy, fails somewhat in health, becomes dull and melancholy—takes a gloomy view of things—but still his ill health is not sufficient to prevent him from following his usual avocation, nor is it noticed by any, save perhaps those who are constantly with him. There may or may not be some cause for this—some excess—or some mental trouble or anxiety—some altered position of his affairs.

Presently, either at night or on first waking from sleep in the morning, or it may be while he is at his usual employment or business, he becomes strange and incoherent—talks at random—mistakes things and persons—writes odd letters: in short, he displays unequivocally by words and actions that the mind is disturbed.

This state of delirium may speedily end in an ordinary paroxysm of epilepsy, with all its accompaniments, after which the patient resumes his wonted health; or it may continue for a considerable time, assuming even the characters of violent mania, with sleeplessness, exciting the utmost terror among the patient's family and attendants: it may last even for days, and then the occurrence of an epileptic fit relieves all doubts as to the nature of the maniacal paroxysm.

It may be, however, that these phenomena will occur with a patient who is subject to epileptic attacks, in which case, if the fact be made known to the medical attendant, he will have the less difficulty in recognising the true nature of the paroxysm.

And it may also happen that the delirium may pass off, or it may terminate in coma, from which the patient may waken up restored, without, in either case, the occurrence of any *convulsive* attack of epilepsy.

The delirium, in cases of this description, is in general of the most decided kind; and it often amounts to mania. The patient is wakeful, noisy, sometimes mischievous, sometimes muttering and incoherent, and unintelligible; sometimes distinct and easily understood, the subject of his ravings being determined by circumstances or events, which had previously more or less occupied his mind.

This form of delirium is not accompanied by any particular constitutional disturb-

ance; the pulse is accelerated, but not to any great extent; its range ordinarily is from 80 to 100; it exhibits no character of strength, but is often full and throbbing.

The effects of any long continuance of this delirium are to induce exhaustion,—as, indeed, is the case with all forms of delirium; and patients sometimes die suddenly, even when they may seem to be on the road to recovery. Hence they require the closest attention on the part of the attendant to prevent undue exertion.

A peculiar feature of this form of delirium is that it comes on suddenly, without previous disorder, or without warning of any kind, as the epileptic paroxysm does. A man may be in perfect health to all appearance, and within five minutes a furious and dangerous maniac. A remarkable case of this occurred to me in a medical gentleman, who was well known and much respected: he was a bachelor, about 45 years of age; he had evinced no particular symptom of illness, but suffered some degree of mental anxiety. One afternoon, having been engaged that day to dine out, he went up to his dressing-room to dress, and within five minutes his housekeeper was attracted to his room by a noise, and found him sprawling on the floor in a paroxysm of mania, shouting at the highest pitch of his voice, as if he had been assaulted by thieves. This case soon proved itself to be of the epileptic kind.

I shall mention another similar case which came under my care. A respectable, well-conducted man, about 35 years old, became, without any assignable cause, delirious at night. It was distinctly ascertained that he had not been drinking, nor had he been overworked; but his wife thought he had been depressed and dull for the three or four days before the attack. A neighbouring medical man bled him moderately, but without any effect upon the delirium. He was brought to King's College Hospital in a state almost maniacal, and it was thought necessary to restrain him by the strait-waistcoat. When I saw him on the following day, I viewed the case as likely to prove of the epileptic kind. I removed all restraint, and, although much pressed to adopt an opposite line of treatment, I gave stimulants and opium. Under this treatment the delirium greatly subsided, and on the following day the patient had a severe epileptic fit, which was followed on subsequent days by several others.

A third case is as follows:—A man, aged 24, a tailor, temperate in his habits, and previously healthy, has had a hesitation in his speech since his childhood. On the 10th of May, whilst at work, he was seized with giddiness and confusion of ideas.

He ran out of the house in which he worked, and, without knowing what he did, ran up and down the street, talking strangely. He continued in this state for a quarter of an hour, and then came to himself, feeling for some time afterwards depressed and shivering, with a mistiness before his eyes.

Next day he was attacked again with the same symptoms, but in a less degree, and he was admitted into the hospital, where, under a course of purgatives and a regulated diet, there was no return of the attack.

A country carman was walking alongside of his horse through the streets in the neighbourhood of King's College Hospital, when he was observed by the policeman on duty to look bewildered, and to be unconscious of where he was going: he gave incoherent answers, and was evidently quite astray in his mind. On the policeman interfering to bring him to the hospital, he resisted with violence, and became quite furious. In this state he was admitted, and it was found necessary to restrain him: he continued violently delirious for about twenty-four hours, and then fell into a comatose sleep, from which he recovered in twenty-four hours more, without any other treatment than shaving the head and keeping it cool, and the use of purgatives by enema and afterwards by the mouth. When this man recovered, we learned that he had never had any similar attack previously, nor was there any evidence of intemperance.

I am frequently in the habit of seeing a pale delicate lad, with large head, who about once in three months, whilst at work, is seized suddenly with giddiness and confusion of thought, followed by a delirious state, in which he talks incoherently, and his pupils become largely dilated; the delirium passes into a state of stupor and drowsiness, and considerable weakness. Purgatives and tonics appear to exercise a beneficial influence upon him, and while he perseveres in the use of steel and quinine the intervals between the attacks are lengthened.

When delirium occurs with patients subject to epileptic fits, it precedes or follows the paroxysm, or both precedes and follows it for very variable times. Sometimes the delirium ushers in the fit, and the patient is violently maniacal for some time previously; at others, the patient comes out of the fit in this state, which lasts a longer or shorter time, the duration of the delirium varying in both cases from some hours to several days.

The frequent repetition of the attacks in this form of delirium kills by exhaustion; or a single attack, if of sufficiently long

duration, may kill in the same way; or the patient may die in, or immediately after, the epileptic paroxysm: but in all cases the immediate cause of death seems to be a state of exhaustion induced by the violent exertion of the patient either in the delirium or in the epileptic paroxysm, or more rarely a state of depression accompanying the invasion of the delirium; or, in cases where there is no violence nor any convulsion, as if the immediate cause which determined the delirious state also exercised a depressing influence.

Now we must particularly notice that this delirium may pass off, leaving the patient in his normal state, with more or less of exhaustion; just as he would be after a common epileptic fit; or, if it end fatally, it leaves no lesion of the brain which is at all adequate to cause death,—no softening nor other alteration of texture. In recent cases, indeed, the brain appears quite normal, with the exception of some variation in the quantity of blood in the blood-vessels dependent on the circumstances which immediately preceded death. As a good example to show that such an apparently normal state of the brain is quite consistent with severe and long-continued epileptic delirium, I shall adduce the sequel of one of the cases to which I have already referred. The patient, Wm. Measures, was admitted in violent delirium. At the end of the second day, as this was subsiding, he had two epileptic fits, one of which lasted half an hour,—the second, five minutes. On the two following days he had a recurrence of the fits, which increased his exhaustion. In the evening of the fifth day he went off into a sleep so tranquil that the nurse did not wake him to give him the stimulus ordered for him (3ij. brandy, om. hora), and he died rather suddenly during the night. The brain was very carefully examined after death, and no morbid appearance whatever discernible; the Pacchionian bodies were well developed, and the grey matter of the convolutions and elsewhere was pale; in all other respects the brain was one which no anatomist could regard otherwise than as healthy.

I shall have again to allude to this pallor of the grey matter as the most remarkable and the most frequent appearance which the brain presents after death from delirium. Sometimes there is with it a large quantity of subarachnoid fluid; at other times there is a total absence of that fluid; so that the pallor of the grey matter which one might be tempted to attribute to a post-mortem infiltration by the subarachnoid fluid, has really no connection with it.

Renal epileptic delirium.—In some of these cases of epileptic delirium we find albuminous urine, either only at the com-

mentum of the attack, and disappearing as it goes off,—which I take to be the least frequent occurrence,—or lasting throughout it and after it, and indicating the probable previous existence of chronic renal disease. These are true epileptic cases; but the imperfect action of the kidney may be justly regarded as a highly probable exciting cause; and so frequently do they occur, that in every instance of delirium, especially of the epileptic kind, the practitioner ought to inquire early into the state of the kidneys by careful examination of the urine. Whether a morbid state of the kidneys may properly be looked upon as the determining cause of the epileptic state and of the delirium, this is a question which I shall reserve for another part of this inquiry; suffice it now to say, that the ascertained coexistence of renal disorder with epileptic delirium is an important feature of such cases, and that clinical research leads us to regard it as an unfavourable omen with reference to the issue of the case. For these reasons I propose to distinguish this affection by the title *renal epileptic delirium*.

George Addis, æt. 43, of intemperate habits, who followed the occupation of a waiter at places of public entertainment, had been in a low gloomy state for some time, in consequence of having been robbed of a sum of money which he had saved. One evening, whilst performing his duties as a waiter, he became incoherent and odd in his manner, and let a tray of glasses fall from his hands. Soon after this he had two or three epileptic fits, and a day or two following he was sent into the hospital. On his admission he was quiet, but not coherent, rather inclined to sleep. On that day, the 1st of December, he had two epileptic fits of short duration. Next day he remained in much the same state, a little more excited, and knocked his head frequently against the wall or bed; fidgeting about in the bed, and staring about him in a vacant manner; at night he became so restless as to require the constant attendance of one person, and he was noisy. Next day he became still more noisy, appearing scarcely sensible; he was evidently unable to continue any train of thought. On addressing him loudly he would begin the answer to a question correctly, but soon pass to some other subject, or become sleepy.

On the fourth day from his admission the epileptic fits recurred, and he became comatose in the intervals, and much prostrated, and died in the coma succeeding the fit.

From the time of his admission the urine was highly albuminous.

The brain, upon careful examination, afforded no mark of disease; the membranes were healthy; the grey matter of the convolutions pale. There was slight hypertrophy of the left ventricle of the heart, and some puckering of one of the aortic valves. The kidneys exhibited an early stage of chronic nephritis.

Delirium in chorea.—Delirium occasionally occurs in the allied malady of chorea. In the cases of general chorea it is developed in the latter stages of these violent shakings which kill the patient by exhaustion.

I have met with one case of severe delirium which was ushered in by symptoms of chorea, and was successfully treated on a plan similar to that which I have adopted with benefit in severe cases of chorea.

The patient, Benjamin Channon, æt. 20, was admitted Jan. 27, 1847; by occupation a saddler; never had epilepsy, but eleven years prior to his admission had chorea, which affected his intellect to such a degree that he became almost idiotic, and was under treatment for three months in the Middlesex Hospital, leaving it perfectly restored. Seven years afterwards he had another slight attack without any impairment of intellect. A month before his admission the choreic symptoms began to reappear: the first indication being fidgetty movements of his fingers, which were soon followed by the characteristic jerking movements of the upper and lower extremities, especially those on the right side, and also of the muscles of the mouth. These symptoms having continued for a month, on the morning of the 26th of January he suddenly took it into his head that a conspiracy had been formed against him: he jumped out of bed, and rushed downstairs into the street in his night-shirt: he was with difficulty captured, and brought to the hospital in a state of furious and frantic delirium, talking and shouting out, and sometimes he would quote Shakespeare, in whose writings, it appears, he was learned; then he would sing and whistle: again he would assume an angry mood, and bite and snarl at all who came near him, and at the bed-clothes and the strait-waistcoat with which he was restrained. The choreic convulsive movements were still present, and he put out his tongue with that peculiar thrust which is characteristic of this disease.

This state of delirium lasted several days, and was accompanied with such great exhaustion that I was compelled to administer food and stimulants very frequently, and in considerable quantity. To a treatment of this kind, to which was added cold affusion twice a day for three or four days,—a plan which I was led to adopt from

the idea of the connection of the delirium with chorea,—the symptoms yielded steadily, so that in a fortnight all signs of delirium had disappeared, and in a month the choreic symptoms had completely vanished.

[To be continued.]

Original Communications.

BRIEF NOTES ON THE DISEASE, INDIAN VILLAGE CHOLERA.

BY ASSISTANT-SURGEON MOORE, B.A.
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PART II.

Pathology of the Indian village cholera.—I have stated that the true type of cholera is a disease originating in a blaze of inflammatory action, which involves every tissue in the stomach and gastro-intestinal canal, from the oesophagus to the rectum. I have to admit, however, that, under certain circumstances, pathological anatomy has not thrown much light on the disease. I have to admit that, under certain circumstances, these views will not be corroborated by pathological anatomy.

Dissection after dissection has been made. The minutest examination with the eye of the solid viscera,—of the membranes of the intestines, and of their component strata,—of the blood in the veins, and of the contents of the intestinal canal, has been made without disclosing a condition of the viscera, and of their structures, which could be pronounced decidedly morbid. The use of the microscope applied to the examination of the membranes and solid viscera, has yielded results in no wise more satisfactory.

Results of pathological anatomy such as these have led to scepticism as to the source of cholera. They have tended to mystify,—they have failed to clear away the doubts of medical men as to the seat of cholera.

In the ordinary run of diseases pathological anatomy elucidates plainly and simply, but unmistakably, the seat of the disease from whence the symptoms have proceeded. Cause and effect are set forth in such prominent relief that ignorance and scepticism are

at once dispelled. But in cholera, in numerous dissections conducted under my immediate surveillance, pathological anatomy has not revealed a degree of inflammation, distinct, extensive, and widely diffused.* Pathological anatomy has not exhibited in a satisfactory manner an abnormal state of a particular viscus,—nor of a particular membrane, upon which the finger could be placed as the seat of the disease,—as the positive source from whence the symptoms of cholera took their origin.

In this respect pathological anatomy has afforded no other aid than that of negative evidence. The dissections have proved satisfactorily that which cholera is not. Pathological anatomy has clearly demonstrated that those who have fallen victims to the Indian village cholera have not died from the effects of hepatitis, of splentitis, or of nephritis: nor have they died apparently, and in the ordinary acceptance of the term, from the effects of gastritis, duodenitis, ileitis, nor enteritis. Never have I seen the liver, the spleen, the pancreas, and the kidneys, more healthy in appearance than in many of those cases of cholera where death has occurred between fifteen and twenty hours from the onset of the disease. Never have I seen medical men more disappointed in their expectations than at the close of the post-mortem examination of a patient who had died from the effects of cholera.

The symptomatology of the disease is perfect. The pathology of cholera, upon which its symptomatology depends, is not invariably apparent to, nor can it be traced by the eye, unless the examination of the viscera be conducted within one or two hours after death.

If this be true, what pathological changes have been noted in the membranes from which the rice-water or sero-mucous discharges have been so profusely eliminated?

The mucous membrane of the stomach and intestines has appeared pale, smooth, shrunk, or shrivelled, without the trace of a blood-vessel being visible in a few instances. The mucous membrane has exhibited a pale, a faded rose-coloured tint, or a bluish white discolouration, in a still greater number.

* The time allowed to intervene between the patient's death and the examination of the viscera, is the sole cause of the diffuse and scarlet efflorescence having disappeared.

The membrane has appeared relaxed, and slightly thickened, from intumescence and puffiness of the coats, besmeared at the same time with the liquid, gum-like, rice-water fluid, voided during life from the bowels and from the stomach. The coats of the intestines have felt doughy under the fingers, from the infiltration of serous fluid into the submucous cellular tissue.

"In the interior of the intestinal tube there has been found, with few exceptions, collected in the duodenum and jejunum intestines, a quantity of cream-coloured, cheesy, pulraceous substance, in a semi-fluid state, resembling in some degree the curds of whey. The blending together of serum, of mucus, of lymph, and of the saline ingredients of the blood, formed this puddle, peculiar to cholera. The ileum intestine has been distended with pure serous fluid, or coated over with a tenacious, viscid, inodorous substance, resembling a thick paste of flour and water. From its consistence no doubt could be entertained as to its being a collection of inspissated mucus. The large intestine has contained a quantity of opaque muddy fluid, resembling the sediment of rice-water, or of barley-water, corresponding in every respect to the true cholera stool, or sero-mucous discharge, loaded with flakes of lymph, passed during life.

But, as to the solid viscera, it did not appear that any change in their structures had taken place when the patients had been in robust health previous to the attack of cholera; nor was it noted in the same cases that the lungs and their membranes, or that the brain and its enveloping membranes, had undergone any morbid alteration.

Traces of venous congestion, and of inflammatory redness in the mucous membrane of the stomach and small intestines, have been strongly marked in those who had survived for a few days. In them, also, I have noted congestive distension of the large venous trunks in the abdomen with dark, fluid, tar-like blood. With this engorgement of the veins there were present engorgement of the liver, and engorgement of the inferior lobes of the lungs, from the extravasation of this tar-like blood into the parenchymatous tissue.

This combination of engorgement of the venous system, extending to solid viscera, with engorgement of

capillary network of vessels supplying the mucous membrane of the intestines, seldom existed, except in the severest type of cholera, and in those who had struggled on for three or four days. In the majority of cases, however, where death has occurred between twenty and twenty-four hours after the first evacuation of rice-water fluid from the bowels, distension of the large venous trunks, and distension of the right cavities of the heart with dark, fluid, tar-like blood, have not yet been attended invariably with venous engorgement of the solid viscera.

The gall-bladder has been found, in some, full and distended with black, treacle-like bile, staining paper of a dark bottle-green tinge. In others the gall-bladder contained a small, insignificant quantity, of viscid bile. In none, however, could it be asserted that there existed a morbid condition of the bile, or a morbid condition of the structures of the liver, sufficient to account for the patient's death. In several instances, where cholera proved rapidly fatal, so far from the liver having contributed towards the patient's death, no organ in the body appeared to be in a more healthy condition.

No. I.—Sir —, Bart., died in England from the effects of cholera. It was not in the power of medicine, nor in the skill of his physician, to have saved his life. I was invited to be present at the post-mortem examination of the body. The autopsy was made thirty hours after death. The mucous membrane of the stomach and bowels exhibited a pale bluish colour, and appeared somewhat tanned. Between the fingers, the coats of the stomach and intestines felt velvety and doughy. The internal surface of the intestinal canal was besmeared with a thin gum-like fluid. The more solid contents of the canal, as far as the colon, resembled the thick sediment of barley-water. With the edge of the scalpel, the thick, viscid, tenacious exudation, was easily scraped off. With the exception of a few straggling, turgid veins, there was not the trace of a blood-vessel visible. The lungs were healthy. The brain was healthy. The solid viscera of the abdomen were healthy. The blood in the large veins, and in the right cavities of the heart, was fluid. In colour it was as dense as it was rosy and

No. II.—Seetauram, a Hindoo cooly, was the subject of cholera. He had been experimented upon with medicines reputed to be infallible specifics. To the dismay of the prescriber of such popular delusions, he died. If his death had not been accelerated, his life certainly was not prolonged by the free administration of the doses puffed abroad as potent specifics. The body was examined. The pathological appearances in the stomach and small intestines differed in no essential degree from those noted in the baronet's case. The autopsy was made twenty hours after death. Between Seetauram, the cooly, and Sir —, the Baronet, his fellow subject in England, this disease, cholera, did not draw a line of distinction, so far as the morbid changes in the fluidity of their blood,—so far as the serum-effusing, lymph-exuding, and mucus-secreting condition of the mucous membrane of the stomach and bowels were concerned.

No. III.—Shaik Kurream Bux, a well-built Mussulman, struggled on to the third day against the effects of cholera. The body was examined between twenty and twenty-four hours after death.

The capillary network of intestinal vessels encircling the duodenum, jejunum, and ileum intestines was brought to view, from distension with the colouring particles of the blood. On the surface of the mucous membrane this engorgement was apparent. The internal surface of the stomach was coated over with a layer of thick glutinous inspissated mucus, semi-transparent, and resembling a thick solution of isinglass. Clusters of vessels gorged with blood were noticed on the upper and under surfaces, at the convex and concave margins, at the cardiac and pyloric orifices. The small intestines were loaded with a thick, gruel-like fluid, a compound puddle or mixture of serum, of mucus, of lymph, and of the saline ingredients of the blood, all blended together. The large intestine was distended with a fluid substance of less consistence, turbid, and resembling the sediment of barley water. Portions of the intestine were cut across, and removed. From the internal surface of the gut, this turbid secretion of sero-mucous fluid trickled away. The coats of each section of the intestine felt tumefied, velvety, and doughy between the fingers. In the first division of the

duodenum there was more intense vascularity than in any other portion of the intestinal tube. The mesenteric and other veins were gorged with blood. The liver, spleen, pancreas, and kidneys were healthy.

The question may be asked—In a pathological view of each of these cases, what was there to account for death after a few hours' illness? Sir —, the Baronet, Seetauram the Hindoo cooly, and Shaik Kurream Bux, the well-built Mussulman, were in robust health previous to the attack of cholera. Our tenure of life must be uncertain indeed, if a gush of sero-mucous fluid from the bowels is sufficient to extinguish it for ever.

Other cases shall be enumerated hereafter to prove that from the period of time allowed to intervene between the patient's death and the examination of the body, we can have but a faint idea of the mischief which has been in active operation during life. Upon reflection the most sceptical will be forced to admit that the cause of surprise should be, not that death ensued so rapidly, but that life should have been prolonged during so many hours.

Let us contrast the pathology of cholera, so unsatisfactory to the eye in the preceding cases, with that of other diseases in which the immediate and direct causes of the patient's death were satisfactorily disclosed, and at once explained.

CASE IV.—*Extravasation of muco-sanguineous fluid into the small intestines.*

Emaum Khan died in severe pain, suddenly and unexpectedly. To all appearance he had been in perfect health seven or eight hours before he was seized with vomiting and pains in the abdomen. In the examination of the body, the small intestines, from the pyloric extremity of the stomach to a point within five or six inches of the cæcum caput coli, appeared distended with fluid, and changed in colour from pale white to purple. The intestines when slit open discharged a thick, tenacious muco-sanguineous fluid, closely resembling in appearance fluid black-currant jelly. All the coats and tissues of the intestines were deeply dyed. The blood in the veins was fluid, ropy, and tar-like. The gall-bladder was distended with bile, but there were not any morbid changes apparent in the struc-

tures of the liver, spleen, pancreas, and kidneys. The bladder was empty.

Soon after the seizure of pain in the abdomen, the pulse sank; a cold clammy sweat broke out over the body. The voice became inarticulate. An insatiable thirst for cold water denoted the internal mischief which was then in progress. He had not had a discharge of any kind from the bowels.

CASE V.—*Extravasation of sero-sanguineous fluid into the small intestines and peritoneal sac.*

On the 12th July, 1846, I assisted in making a post-mortem examination of Kunei, a driver attached to the 3d Company of Artillery, Gwalior Contingent.

The abdomen was distended and tympanitic. When the transverse section of the parietes was completed a quantity of reddish-coloured fluid gushed out. Within the peritoneal sac, and lodged in the pelvic fossa, the quantity of this sero-sanguineous fluid appeared to us to be equal to two or two and a half pints. The viscera, viewed in situ, exhibited the following appearances:—The peritoneal surface of the liver, stomach, and spleen, was smooth and glistening: free from disease. In the middle division of the abdomen, the small intestines and mesentery presented a livid, dark red, purplish colour, as if they had been steeped for some time in the lees of port wine. The peritoneal coat of the intestines, although polished and shining, was changed in colour, from pale white to a dark livid, purplish hue. This membrane, when detached from the other coats of the intestines, retained the same dark livid colour. Throughout the entire length of the small intestine, from the duodenum to the caput coli, the external appearance and the purple colour of its coats presented no variety.

The stomach, when slit open from the cardiac to the pyloric extremity, was found healthy. The upper portion of the duodenum, close to the pylorus, was inflamed in a slight degree. Beneath the mucous membrane numerous small, circular, sanguineous clots were visible. At the lower division of the duodenum the mucous membrane was tumid, velvety, infiltrated with sanguineous fluid, and stained of a dark red colour: underneath the mucous membrane of this portion of the duodenum

the colour of the subjacent structures was one continuous sheet of deep redness.

The small intestine, throughout its entire extent, from the duodenum to the colon, was distended with a thin, dark, fluid substance. Ligatures were applied to the upper, middle, and lower divisions of the intestine. From each portion when slit open this same dark fluid substance flowed in a stream. In colour and consistence it bore a striking resemblance to fluid black-currant jelly. Mixed with water or spirits it communicated a dark red colour to each. Rubbed over paper it left a deep red stain: rubbed between the fingers it stained the skin of a blood-red, but possessed no odour. So deeply dyed were the mucous, sub-mucous, muscular, and peritoneal coats of the duodenum, jejunum, and ileum intestines, that throughout their entire course there could not be discovered a single inch of membrane of a pale healthy colour. This purple discolouration extended as far as the large intestine. Three inches above the valves of the cæcum caput coli the deep purple colour of the membranes terminated abruptly. From this point it partook rather of a bright crimson red. In the remaining portion of the intestinal canal the mucous membrane appeared pale and healthy. The blood in the abdominal veins was in a fluid state.

Symptoms on admission.—On the 11th of July, this artillery-driver was brought into hospital, from the lines, at 5 o'clock in the evening. He was pulseless. His extremities were cold. The body was covered with a cold clammy sweat. He suffered from cramps, and violent pains in the abdomen, increased by the slightest degree of pressure. His voice was hollow. His breath cold. His tongue moist. The constant call for cold water to quench his thirst was a prominent symptom in his case. The abdomen was tense, distended, and tympanitic. On his way to the hospital he had vomited once or twice.

On the morning of the 11th he was present at parade as usual. After dismissal from parade he returned to the Artillery Lines at 8 o'clock A.M. At 11 o'clock A.M. he felt a gripping pain in the abdomen, which gradually became more violent, and was accompanied with vomiting. At 3 o'clock P.M. one of his comrades went into his hut, and found

him suffering from cramps, and in violent pain. At 7 o'clock P.M. he died. Thus between the first attack of pain in the stomach and his death not more than eight hours and a half had elapsed.

CASE VI.—*Extravasation of muco-sanguineous fluid into the small intestines.*

Gunga Deen Tewarry, the favourite servant of his master, bathed at 10 A.M. In half an hour afterwards he was seized with cramps in the stomach, and violent pains in the abdomen. These pains became so acute that he lay writhing on his back. He was treated actively, but died in the evening. During the progress of the disease the pulse was full and bounding,—hard, contracted, and wiry,—small, flickering, and at length disappeared. The abdomen became tense, painfully blown out. He suffered from cramps in the extremities, from occasional vomiting, but not from purging.

In the post-mortem examination of the body there was a blush of inflammation at the pyloric extremity of the stomach: in other respects this viscus was healthy. The duodenum, jejunum, and ileum intestines were discoloured; their peritoneal surface was stained of a deep purple hue, but there was not any fluid extravasated into the peritoneal sac. The intestines were distended with a dark fluid substance, which stained the fingers red: in consistence it was thick, tenacious, viscid. As this inodorous claret-coloured substance dropped from the internal surface of the small intestines it resembled fluid black-currant jelly. All the coats of the intestines presented an uniform deep purple or violet colour, so completely had they been dyed. There was no thickening of the mucous membrane. The large intestines appeared healthy, as did also the solid viscera in the abdomen.

Pathological anatomy revealed to us the immediate and direct causes of the rapidly fatal termination of the disease in these cases. Pathology pointed out in plain and convincing language that death was caused by certain morbid changes in the structures of the small intestines, and by certain morbid changes in the fluid circulating through the capillary network of the intestinal vessels. Upon these lesions, easy of demonstration, the finger of the anatomist was placed with certainty and without difficulty.

Why is it not thus in the Indian Village Cholera? Why can we not point with equal confidence to pathology, to clear away all doubt as to the seat of the disease? The question admits of repetition.

Were the sero-mucous discharges from the mucous membrane and subjacent tissues eliminated in such profuse quantities in cholera, tinged with the colouring matter of the blood,—were the membranes dyed of a deep purple or violet colour, instead of being pale, soft, shrunken, or shrivelled,—anatomists would not hesitate to declare that the pathology of the Indian village cholera was clear, simple, demonstrable. The collection of half a pint, or of a pint, of blood-red fluid would be a convincing proof that the seat of the disease, the source of the symptoms, the immediate and direct cause of death, were in the mucous membrane and subjacent tissues of the stomach and intestinal tube, and in these alone.

The elimination of muco-sanguineous fluid from the internal surface of the duodenum, jejunum, and ileum intestines, proved fatal in the cases recorded. I have never met with cases of cholera in which death ensued so quickly. Were this form of disease to become endemic or epidemic, the Indian village cholera, with its terrors, would be thrown completely into the shade: so much more serious in its consequences is that form of disease in which sero-sanguineous and muco-sanguineous fluids are exhaled from, secreted by, or exuded through, the several component strata of tissues of the stomach and intestinal tube.

The extravasation of muco-sanguineous fluid into the small intestines is not difficult of explanation. From some cause unknown the balance of circulation in these intestines is lost. A determination of blood towards the parts is excited: the quantity of blood attracted to the surface proves to be excessive. The capillary network of vessels, gorged beyond the power inherent in their coats to retain the circulating fluid, finds relief in that process of nature by which the blood percolates through the tissues and membranes of the intestine, and finally lodges in the intestinal tube, or in the sac of the peritoneum. Thus it was in the case of the artillery driver: thus it was also in the case of Gunga Deen Tewarry, the servant; and (may we not also

state?) thus it is in cholera, where the colourless portion of the blood percolates through the component strata of tissues of the stomach and intestinal tube.

Are we, then, justified in pronouncing the pathology of the disease obscure and unsatisfactory, because, in the majority of cases where death has taken place between twenty and twenty-four hours, there cannot be detected the trace of a bloodvessel,—because there is a total absence of all those appearances of vascularity, of intense and deep-seated redness, of distinct and circumscribed violet-coloured patches of blood, with which our ideas of inflammation of the membranes have been familiarised? Are we, I repeat, justified in pronouncing the existence of sero-mucous fluid,—the existence of a creamy, pultaceous, abnormal secretion,—and the existence of a thick, viscid, inspissated mucus in the stomach and intestinal tube, insufficient pathological evidences of the disease, cholera, being dependent on a fretted, and irritable, and sero-mucous eliminating condition of the tissues of the intestinal canal endowed with vitality?

Distinctly, I assert, we are not justified, unless we consider as inseparable from a fretted and irritable condition of the membranes of the stomach and intestines that degree of redness, that deeply-dyed purple colour of the tissues, from the infiltration of blood and serum. If, on the contrary, we rest satisfied that this sero-mucus eliminating condition of the membranes of the stomach and intestines—the characteristic feature of the Indian village cholera—can exist, and in reality does exist, without the slightest discolouration of the membranes, and without the trace of a bloodvessel being visible, we may safely aver the evidences are strong—the proofs are convincing—that in the tissues of the stomach and intestinal canal endowed with vitality, and in these alone, is the seat of the disease cholera.

What need we more from pathological anatomy?—Nothing, save the corroborative proof afforded by the morbid appearances of the mucous membrane and subjacent tissues when the stomach and intestinal canal have been slit open within one or two hours after death.

[To be continued.]

BED-SIDE SKETCHES,

By JOHN CHARLES HALL, M.D.

Fellow of the Royal College of Physicians, Edinburgh; Member of the Royal College of Surgeons, London; Author of "Remarks on the Treatment of some of the more important Diseases, including the principal Diseases of the Eye," &c. &c. &c.

"Concordiâ res parvæ crescunt."

[Continued from p. 586.]

No. VII.—THORACIC CONSUMPTION.

[Continued.]

γ. *Treatment of Thoracic Consumption.*

THIS part of our subject, in accordance with the plan proposed at the commencement of this article, must be divided into two parts. We proceed, therefore, to consider, first, the prevention of the development of the tuberculous diathesis; and, secondly, the treatment of thoracic consumption.

a. Prevention of the tuberculous diathesis.—"The causes of tuberculous disease," says Sir James Clark, "like those of most diseases, are referable to two distinct heads—the remote, and the exciting; or those which induce the constitutional predisposition, and those which determine the local deposition of tuberculous matter after such predisposition is established. The one class of causes operates by modifying the whole system; the other, by determining, in a system so modified, the particular morbid action of which tuberculous matter is the product."

Taking this axiom for our guide, we proceed to consider what are the causes detrimental to health which are to be avoided, in order to prevent the establishment of the tuberculous cachexia? for daily experience more and more fully proves that the ravages arising from thoracic consumption are to be arrested rather by seeking to remove everything which may tend to promote the constitutional predisposition, than to find in some medicine a fancied "*specific*" for the disease when its fatal seeds are sown. This of necessity opens a wide and very interesting field for inquiry—a field the extent of which will of necessity compel a very brief sketch of each of the topics which may suggest themselves.*

* In speaking of the physical signs of thoracic consumption, allusion was made to a case under

In the etiology of disease there is no fact better established than that a peculiarity of constitution in the parents gives rise to the tuberculous disease in their children, and that in proportion to the degree in which the disease is developed in them. This is frequently seen in the offspring of scrofulous parents; the symptoms being often much more strongly marked in the younger than in the first-born children. When the health of the parents undergoes a change during the increase of their family, it sometimes happens, as a consequence, that the elder children are healthy,* and the younger ones the victims of thoracic consumption. With regard to the disease being more readily transmitted by the father or the mother; this question is a problem difficult to solve. Professor Nasi, of Bonn, is of opinion that the hereditary predisposition is more commonly derived from the mother. We are inclined to think that the child may possess the constitution either of the father or the mother,—a fact seen in almost every family; and it has certainly been remarked, with much truth, that the more nearly the offspring resembles the conformation of its father or its mother, the more closely will its diseases be those of that parent. When both parents possess in a marked degree the tuberculous constitution, the chances of escape for the children become very much diminished: still, we every now and then observe, even in families where there is a strongly marked predisposition to consumption, a generation escape: this arises, evidently, from the improved physical condition of that generation, and from an avoidance of those causes which are favourable to the propagation of tubercle,—a fact worthy of attention, as calculated to induce a strict compliance with a plan of treatment necessary to maintain the body in a state of health. Sometimes a child is tuberculous at birth; but, so far as our own experience enables us to speak, we have seldom seen an instance of this, except where the mother was labouring under

the disease in an advanced stage. Once, however, we saw an infant with this diathesis strongly marked at birth; but the father had died of thoracic consumption when the mother was only four months advanced in pregnancy. These are facts well worthy the attention of parents; and how much of pain, of sorrow, and of unspeakable misery, would every year be avoided in this country by the interdiction of marriages between persons where both are labouring under this peculiar state of the system!

It must be added, that gout, cutaneous diseases, syphilis, when treated with long courses of mercury, spirit drinking, chronic dyspepsia, especially that form to which Dr. Todd has directed attention, under the title of “strumous dyspepsia,”—everything which has a tendency to deteriorate the vital powers in the parents—may give rise to the tuberculous constitution in their children. Dyspepsia is undoubtedly one of the most prolific sources of cachexia in every form,—an aphorism that will not be controverted; for a healthy condition of the digestive organs, and a proper performance of their functions, is essential to the due assimilation of food, and a constant supply of healthy nourishment to the body.

From the very interesting Report of the Physicians to the Hospital at Brompton (p. 18), it will be seen that, in a thousand and ten patients labouring under thoracic consumption, *one in four* were born of consumptive parents. The exact proportion is 18·2 per cent. of the males, and 36·3 per cent. of the females. It is, however, the opinion of the gentlemen by whom that report was drawn up, that, if this investigation had been extended to preceding generations, “that is, to grandfather and grandmother, and to collateral relatives—uncles, aunts, brothers, and sisters,—that the influence of predisposition would be shown to be still more considerable.” The same table exhibits, also, the singular fact that daughters are more liable to inherit thoracic consumption from their parents than sons; and this in the proportion of two to one.

If a perfectly healthy infant be kept in a close and badly ventilated room,—if no attention be paid to diet or to cleanliness,—the external lymphatic glands, more especially those of the

the care of “one of the physicians to the Hospital for Consumption at Brompton.” The physician who first directed attention to this peculiarity was Dr. R. P. Cotton, whose interesting lectures in the pages of this Journal are worthy attentive perusal.

* See Sir James Clark on Consumption, p. 319.

neck, will be seen to enlarge; the hue of health will be exchanged for a pallor which gradually creeps over the countenance; the muscles become soft, the abdomen enlarged, and in a very few months the tuberculous constitution may be established,—and this, too, in a child whose parents are perfectly healthy, and whose brothers and sisters have never exhibited any symptom of this disease. If what has just been stated be true of a child born without any hereditary predisposition, what must inevitably be the fate of another born of unhealthy parents, or of parents highly infected with the glandular constitution, if exposed to these adverse circumstances? The same remark applies to every period of life; but, until the body has arrived at maturity, tuberculous disease may be more easily induced by causes adverse to its healthy development.

Having taken this general view of the subject, let us consider more in detail some of the influences tending to feed and assist the progress of a disease which every year carries off so many thousands of our countrymen, and the fatal fruits of which, from the seeds now sown, will be ripened in generations yet unborn.

Impure air.—How few are aware of the condition of the dwellings of the poor in the back courts of London and our large towns! How many roll along in their carriages through the magnificent streets of the metropolis, without knowing that within a few yards of them the air is tainted, and pregnant with the causes which give rise, amongst others, to the disease the ravages of which we are now contemplating! These causes of death, though often unknown to the rich and great, nevertheless exist. Rooms never cleaned—walls never purified with a white-wash brush—floors the nature of which is hid by layers of dirt, the accumulation of months. These abodes are seldom visited by the sunbeams; for although the Almighty commanded, saying, “*Let there be light*,” man has so contrived the dark lanes and narrow courts of the back streets of our large towns, that the sun and the air can never reach them. These houses are surrounded by heaps of decomposing animal and vegetable remains, are without drainage, or drained of the cesspool system; and yet I

places families consisting of at least ten or twelve or more human beings are crammed into one room, in which all the domestic duties must be performed: men, women, and children herd together,—eat, drink, sleep, wash, dress, and undress before each other. It is in such places that all ideas of virtue, decency, and morality, are broken down,—that crime is created, brought forth, nurtured, or concealed: here the babe enters the world without God’s blessing, and the old man leaves it without a hope.

The districts thus unhealthy are well known to those who have paid any attention to the sanitary question;* the effects are known also. It is known, as certainly as the large red cross on the door, and over it the words, “*Lord have mercy upon us!*” in the days of the plague, denoted that house to be visited by the pestilence, that in all densely-populated districts, where the streets are dirty, narrow, and badly drained, the houses ill-constructed, without the means for ventilation, cleanliness, or decency, there will most assuredly be found a squalid, wretched, and strumous population. The system, too, of burying the dead in the midst of the living is one highly detrimental to the health of the inhabitants of large towns. It would be improper here to allude to the cruel indecencies practised on the decaying bodies of departed relatives and friends in city burial-grounds, but we cannot refrain from remarking that the vapours arising from these tolerated nuisances are highly prejudicial to health, and must be ranked amongst the most prolific of those causes which increase the “bills of mortality,” and seriously affect the health of towns by poisoning the atmosphere; thus turning that which was intended, by the purification of the circulating fluid, to give additional strength, and health, and vigour to the body, into a poison productive of lingering disease and death. Let us hope the day is not far distant when the cities of the living will cease to be also cities of the decomposing dead; let us hope that every assistance will be given by the bishops, and clergy of all denominations, for the closing of every churchyard and burial-ground in

**Hand-book of a Practising
Physician, M.D.; the Lancet,
Sanitariness of Towns, by*

the centre of large towns, in order that the present evils may be avoided. Then will our churches and chapels become truly temples devoted to the praise and the glory of the Creator, and not, as now, "whited sepulchres," and all beneath them full of dead men's bones. In ages long since fled, Moses imposed upon the Jews sanitary laws. Among Grecian sages, Aristotle and Plato advocated the absolute necessity of a sanitary police; whilst the Ediles saw that the streets of Rome were kept clean, and the sewers in a proper condition. In our laws relating to health we are yet in a state of barbarism; and many are the useful lessons we might glean from the system of the ancients.

Some writers have gone so far as to assert that impure air and want of light are the only real causes of scrofula; and, although other causes may tend to promote the mischief, these are the most essential to its establishment. In a very sensible essay,* M. Baudelocque contends that, even if a child be fed on a sufficient quantity of good and nutritious food, if living in a house so placed that the sun's rays do not reach it, or the fresh air cannot be supplied in sufficient quantities,—“if (says he) the house is small, dark, low, and badly aired, scrofulous disease will inevitably supervene;” and it is very certain in this country, in abodes such as we have just been examining,—in the confined houses of the poorer part of the inhabitants of our larger manufacturing towns, even when a sufficient supply of food is given, such nutriment cannot be properly assimilated in the absence of light and pure air. We may therefore safely conclude that the daily respiration of the tainted air of the ill-ventilated narrow dark streets and alleys of towns of many manufactories, workhouses, and workshops (nor must the too often badly ventilated school-room and sleeping apartments of the pupils be omitted)—have a fearful tendency to excite the latent disease into a more active condition, where there is a strong hereditary predisposition, or even to create such a disposition in the most healthy, if circumstances so prejudicial to health be prolonged.

The same adverse causes which tend to produce *thoracic consumption* in man,

occasion the deposit of tubercles in animals. The late Mr. Youatt told us that many of the animals under his care at the gardens of the Zoological Society died from phthisis. In the Archives de Médecine, vol. xxv., M. Reynaud has published a very interesting account of the diseases of the monkeys in the Jardin des Plantes. In fourteen of these creatures tubercles were found in the lungs after death, and in some other cases the lungs appeared altogether converted into tuberculous matter. We have ourselves often induced the disease in rabbits by want of light and bad food, and MM. Andral and Dupuy have even observed it in the fetus of the rabbit and sheep. It is said that, after a certain period of confinement in the cow-houses of that city, all the milch cows in Paris become affected with tubercles. Aristotle discovered tubercles in the pig, the ox, and the ass.*

Unwholesome food.—Food unfitted for the supply of the wants of the growing body is undoubtedly another very frequent cause of this disease. If the most healthy child at birth be suckled by a woman whose milk is either deficient in quantity, or not sufficiently good to nourish the infant imbibing it, the result will, in all probability, be the establishment of that degraded condition of the blood which gives rise to the formation of tubercle. Not only is the coarse food, almost devoid of nourishment, given to the children of the poor, a cause of scrofula, but the stimulating diet too often seen in the nurseries of the wealthy has a tendency towards the same result; and, although the disease may not at first exhibit exactly the same types, the end will be the same in both. It is absolutely necessary to the growth and health of the body that both the quantity and kind of food should be adapted to the age of the child, and to the requirements of the economy.

The same remarks will apply to *clothing*, to *exercise*, and to *cleanliness*. The clothes should be adapted to the season, and care taken so to cover the body that the circulation may be carried on. The dress of young females is generally far too scanty during the day; and in the evening, how often is the young lady, of eighteen, thinly clad, obliged to remain for many hours exposed to all the health-destroying effects of a

* Mémoire sur les Scrofules, Revue Médicale, 1832, vol. i. p. 10.

* Historia Animalium, lib. viii. cap. 21.

heated ball-room, and when the excitement is over, relaxed and exhausted, she is taken into the cutting currents and cold frosty atmosphere of a winter's night! Is it not wonderful that any escape these baneful influences? And although we often hear many complaints from which this class of patients suffer set down by their good mammas to the delicate constitution inherent to the sex, we are induced to consider the powers of resistance possessed by the fairer part of the creation perfectly wonderful. Let any man be so clad, so tight-laced, so suffocated, so exposed, and how long would he be enabled to boast of either mental or bodily vigour?

With regard to the skin,—unless the greatest attention be paid to cleanliness, a state of body incompatible with health will result. The skin absorbs oxygen, and throws off carbonic acid gas and water,—a function similar to that performed by the lungs. It should, therefore, ever be kept in mind by the practitioner, that in all patients,—more especially in those in whom a tendency to thoracic consumption is suspected,—that the healthy condition of the skin must at all times be maintained. Hence the advantage of an occasional warm bath, the daily sponging with cold water, and the use of the flesh-brush, by which means the skin is freed from all matters which obstruct free absorption and exhalation. Of the evils of tight-lacing, the encasing the body in stays, so much has been written, and so well, that no additional remarks are required to point out to the youngest student their inevitable results; and yet this system of tight-lacing, by which the functions of respiration are so much interfered with,—because the action of the muscles thereby is crippled, and the free expansion of the chest rendered impossible,—still forms an idol—a fashionable god to whom tens of thousands bow the knee and perish. It may be endured for a few hours at night, amid the glitter of lamps, the strains of music, the excitement of the dance: but all this time the motions of the ribs are restricted, perfect respiration is impossible, the blood is only partially vitalised, and the functions of nutrition, as a matter of course, imperfectly discharged. But mark even yet another result! the internal sensation of respiration not being gratified, and as each inspiration becomes less full, the wants of the body

force, as a compensation, increased frequency: the respiration is hurried, and a tendency to inflammatory action is set up. The heart participates in the mischief, and we have a quickened pulse and palpitation. In the morning comes a feeling of debility: the tightly-laced stays cannot be borne; the muscles of the back, no longer sustained by the accustomed pressure, give way; the spinal column bends: a wonder is expressed why Miss Martha, once so remarkably upright, has now round shoulders, and the wonder is soon exchanged for the most just and fearful anxiety when lateral curvature of the spine becomes so evident that it cannot be mistaken; and then, and not till then, the medical attendant of the family is consulted; but the mischief is done.

In childhood, and during the growth of the body, the exercise should be sufficient fully to bring into play, and thus fully to ensure the vigour of all the muscles. This is promoted by the active sports of boys. But how different the lot of unhappy girls, who, after spending many hours in school, reading, writing, working (at least nine hours a-day)—are permitted perhaps one hour for taking a walk! This exercise consists in walking arm in arm with solemn mien, or with books in their hands, reading, along the road, and is altogether insufficient for the exercise of the muscles specially engaged; and many others are left altogether inactive. What we have said of dress, as regards the head and chest, applies also to the legs and feet, during these solemn funeral-procession-like-walks; and the thin shoes and spider-web stockings of necessity cause the capillary circulation through the extremities to become languid, and the wearer to suffer all the debilitating influences of cold.

Nor can we refrain from adding a word or two of caution against the forced and too early over-cultivation of the intellectual faculties. It never was intended that a boy of six or eight should be taught German and French and Latin, and at least the Greek alphabet; to say nothing of the other “sciences, writing, arithmetic, and the use of the globes.” We experienced a thrill of horror only the other day, on looking over a printed list of subjects we were assured by an anxious parent were all taught at a training establishment of this description near London, and which

he fancied could be understood by his son, a boy of not more than twelve. Other parents will tell you "that it does seem a good many things for a boy to learn, but their son is particularly strong, and can bear it very well; besides he *will* learn, and there is no keeping a book from him." Such a boy is the one of all others we would most anxiously guard against the cramming system. This is a high-pressure age, and never was it more urgently the duty of the physician to caution parents against allowing an amount of food to be given to the brain which it is quite impossible it can bear. How often has a fond father and mother, proud of the acquirements of their darling boy, boasted of his talents to their friends, and if the medical adviser has ventured a caution, how quickly have they replied, "it does not at all hurt him." This is very wrong every way. In the first place, even if the brain do not become softened, and the once quick boy converted into an idiot, by this over-culture, he will be no further advanced in his studies at twenty, than another boy who has been more judiciously educated—educated so as to preserve the "*mens sana, in corpore sano.*" What does this excess of study prove but that sedentary habits are indulged in, and weakened digestive powers, constipated bowels, mal-assimilation of food, tuberculated lungs, &c. &c., are the results? More than this: the brain, like any other organ, becomes exhausted by over-exertion; the nervous system is weakened, and these functions being defective, not only does the mind decay, but all the organs of the body share in its debility; because all of them receive a diminished and vitiated supply of nervous stimulus, a proper share of which is highly requisite to their health. This mental depression, the result of a taxing of the dawning powers of the youthful mind beyond what they are able, is a chief cause of thoracic consumption; and parents will do well to regard this caution, and every physician of experience will join us in reprobating this injurious system. The over-taxing of the mental powers ought to be avoided in even the most robust children: how much more so in those in whom there is a strong hereditary tendency to the tuberculous constitution! In all boys and girls of delicate frame, the period for study should be considerably reduced, and that for

exercise out of doors much increased. The school-room should be large, and well ventilated. The same remark applies to the sleeping apartment: each child should have a separate bed, and the number in each room not so large as to taint the atmosphere, and render it unfit for the purposes of respiration.

Allusion has already been made to the hereditary transmission of tubercular diseases, and of the misery that must inevitably result from a union between two young people both labouring under a constitutional taint. This is a subject of much delicacy—one on which the physician is seldom consulted; but it is nevertheless one highly important, and one well worthy the most painful consideration of every rational being.

It would be well for parents to remember that the happiness of their children will depend upon themselves, and that the sins of the fathers pass downwards to the third and fourth generation. Dyspepsia in all its forms requires at once attention; and the importance of this class of diseases will become still more apparent when we consider that the evils of a long-continued disordered state of the digestive organs end not with the life of the individual; they are entailed on the unfortunate children, and step by step the disease degenerates as it descends, until the dyspepsia or gout of the father becomes scrofula or thoracic consumption in the son. How many parents labour to hand over wealth, and estates, and titles, to their children! how few, to adopt a more healthy and rational mode of living, that property may be accompanied with that without which it is altogether valueless—health!

As the tuberculous constitution may be formed even before birth, the young mother will do well to remember—and it is the duty of the physician faithfully to teach and to tell her—that it will depend in a great degree upon herself whether the child within her be robust or not. Stimulants of all kinds should be avoided, and exercise taken daily in the open air; and it is hardly necessary, we hope, to add, that the ball room—public assemblies, the theatre—every thing which can tend to violently excite the mind, are injurious, and consequently to be shunned. The health of the infant will depend upon that of the mother, and from the first moment of pregnancy until the birth she is accountable for

her child. If the mother be of a strumous diathesis, if consumption has ever been known in any member of her family, it will be well at once, both for her own sake and for that of her child, that a young and healthy wet nurse be provided. In three or four months a few spoonfuls of meat-tea may be given daily. Exercise in the open air, cleanliness, ablution with tepid water, and cold affusion to the head, than which nothing more powerfully tends to prevent congestion, supply a rational method for managing children; but yet it is one even now too generally neglected. Parents, and nurses, and friends, are so apt to consider consumption an "exaggerated cold on the chest," that its prevention is thought to consist of precautions against taking cold, instead of the plan which is calculated to give health and vigour to the body. As the child grows apace, attention must be paid to every function: a sufficient quantity of plainly cooked animal food, a glass of bitter beer, or porter, at dinner, milk night and morning, sea-bathing, or a cold bath twice a week at home during the summer months, is the plan of treatment we have found most conducive to the strength of the growing body. When the age of puberty has arrived, the peculiar functions of the female will require every attention. In the boy the state of the nervous system must be examined, and if need be, in both sexes, an end put to practices which are far too common, and which excite a marked influence in developing the tuberculous constitution.

What has been said of the overstraining of the mental powers in childhood, may be repeated here: how many young men are yearly offered up as victims on the altar of ambition! how many, when too late, have

"—view'd their own feather on the fatal dart,
And wing'd the shaft that quiver'd in their heart."

It is truly wonderful how comparatively seldom thoracic consumption is developed in those who have been brought up in the pure air of the country, and properly fed and subjected to a judicious prophylactic treatment.

A question often will arise as to the removal of a patient to a warmer climate, when a suspicion of the deposition of tubercle is created in the mind of the patients or their friends. A sheltered situation should be selected, as far removed as possible from the middle of large towns. The house should have

a southern aspect, and the apartments be spacious and lofty. The bed-room should be aired during the day by a fire, so as to prevent a chill on going to bed. The patient should repose on a mattress, and the bedding be exposed every day to the air. The hours of repose should never be less than ten. Pure mild air is always essential; but the question of removal from home is often considered at too late a period. When it is thought desirable, *Hastings, Clifton, (Brighton in the summer), Torquay and Undercliff*, in the Isle of Wight, all possess many recommendations; we give the preference, for winter quarters, to *Torquay*, from its sheltered situation, by which the invalid escapes the cutting winds from the north and east: the surrounding country is beautiful and picturesque in the highest degree, and the accommodations excellent.

For a more particular account of the climates of other countries, every information will be found in the able work of Sir J. Clark. The climate of *Madeira* is most certainly the best adapted for those who have a tendency to consumption, and the nearest approach to this are the *Bermudas* and *Canary Islands*. We look, however, on *change of climate only as a preventive of the development of tubercle, and not as a cure for consumption*. Where there is a strongly marked predisposition, a residence of three or four years in a warm climate about the age of puberty, may be, and often is, highly advantageous. But when the disease is more advanced, when the tuberculous deposit has taken place, very great caution is required before venturing to send the patient away. When the disease is still more advanced, it is cruel to do so—cruel to expose any one in this condition to the fatigue of travel: far better is it to permit the patient under these circumstances to remain at home surrounded by friends, enjoying the society of those who are dear, comforted and blessed by their attentions, than to wear out the system by going from place to place, in a distant country, to expire among strangers, and be buried on a foreign shore.

Pure air—a nourishing but not too stimulating diet—exercise daily out of doors, more especially on horse-back—the improving of the contracted chest, by frequent deep inspirations, and the use of dumb-bells—warm clothing, and particularly of the chest and feet—

cleanliness—cold baths, sponging with cold salt and water, and friction to the skin—the most rigid temperance—the abstaining from every vicious indulgence, and from every possible cause which may produce mental and bodily exhaustion, as well as from those occupations which are known to be injurious to health,—attention under the superintendence of a medical man to the state of every function, particularly of the digestive organs—are the means which

long experience has convinced us are best calculated to prevent the formation of tubercles in the lungs.

These are considerations of national importance, for we fully agree with Sir James Clark that a very large proportion of those who die of consumption from twenty to thirty, might be saved by the timely daily adoption of these simple measures.

[To be continued.]

Sheffield, April 1850.

ON THE COMPOSITION OF THE EVACUATIONS IN DIARRHŒA.

PROFESSOR OESTERLEUS, of Stuttgart, gives the results of his examination of the excretions of the patients under his care during a recent epidemic of diarrhœa in the Baltic Provinces.

The chief point which these investiga-

tions have afforded is the great daily loss of albumen, more especially in the severer forms of the disease. The more violent the attack, or the nearer its commencement, the more abundant the albumen in the stools, and the reverse. We have selected the following from many other observations given by Prof. Oesterleus:—

Case.	Day of disease.	Amount of evacuations during 24 hours—in Eng. fluid oz.	Daily loss—in English grains.		
			Albumen.	Urea, uric acid, and other organic matters.	Fixed salts.
1	10	735	1221·142	194·418	228·364
"	12	1229	1240·287	709·122	205·019
"	14	281	280·826	181·155	49·204
2	1	1339	1109·310	235·747	496·945
"	5	808	1008·885	335·065	295·910
"	8	843	927·000	278·715	244·110
"	17	280	333·720		

Dr. Oesterleus estimates the daily loss of albumen to be on an average, during the first fourteen days, from 50 to 60 grammes (about 700 to 900 grains); during the last eight days at 20 grammes (about 300 grains). Thus, in cases of about three weeks' duration he found that during this period from 13,000 to 15,000 grains of albumen are thrown off by stool.

The extent and importance of this loss of albumen may be judged of by comparison with the composition of the evacuations after purgative medicines, and in typhus.

It will be observed that in both these cases the loss of albumen is very considerably less than in diarrhœa.

After a purgative of calomel and jalap—

Water	978·2
Albumen	3·3
Salts	18·5

1000·

In a child labouring under exanthematous typhus, in whom the quantity of evacuations during the twenty-four hours amounted to three hundred and fifty ounces, including the urinary excretion, their analysis yielded—

Water	979·0
Albumen	3·9
Salts and organic matters	17·1

1000·0

The effect of such evacuations in deteriorating the blood must be evident when we consider that the epithelium of the mucous membrane forms a considerable portion of the albuminous matter, and that the quantity of fluid passed off by the bowels is generally greater than that conveyed into the system by the ingesta. From one-fifth to one-sixth of the whole mass of blood is thereby lost, and from a fortieth to a twentieth of its due proportion of albumen. Much of the water thus displaced from the circulation is replaced by interstitial absorption. The results of such a drain of solids and fluids on the system is shown in the rapid emaciation, and the state of the functions generally.

Dr. Oesterleus deduces from his investigations the opinion that the essential nature of diarrhœa consists in a change taking place in the chemical relations of the elements of the blood.—*Heule's Zeitschrift*, vol. vii. 1849.

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MEDICAL GAZETTE.

FRIDAY, APRIL 26, 1850.

It would appear that there is some difficulty in assigning a title to the practitioners of medicine and surgery in England. We have Apothecaries, Surgeons, Surgeon-Apothecaries, replaced in recent times by the very ambiguous term of General Practitioner, which has nothing *medical* about it, — *German* Doctors comprising, singularly enough, a very large class of *Englishmen*, Physicians, and M.D.'s or Doctors of Medicine. Where the Apothecary ends and the Surgeon begins it is impossible to say. We can only settle the point by referring to the diploma or license; but this does not affect the question practically, because the Apothecary notoriously practises as a Surgeon, and the Surgeon as an Apothecary. No one now writes himself "*Apothecary*," and the Editors of the Medical Directory, with all their prudery and inconsistency about strictly designating the classes of the profession, have not ventured to give to a single Licentiate of the Hall his proper legal title. Why they have adopted a different course with the Licentiates of the College of Physicians, and have marked some of them Physicians, and others "M.D.'s," although of no University, and not even claiming to be the possessors of a sham diploma from some venal Teutonic establishment, we are at a loss to conceive. Perhaps it arises from a desire, now so prevalent among dabblers in medical reform, to grasp at the shadow and lose the substance. There are distinctions enough already, and feuds enough regarding these distinctions, without having them unnecessarily increased and annually paraded in type. The conductors of this publi-

cation should adopt some uniform rule in designating medical practitioners, and not deceive the public either by applying different titles to individuals equally qualified in law, or by depriving others of titles which they have long enjoyed, if not by right, at least by long-established custom and courtesy. Under the head of ASHWELL, SAMUEL, we find M.R.C.P., while in the street-portion of the Directory these letters are dropped, and we have the letters M.D. Under the name of ADDISON, WILLIAM, we find L.R.C.P., and in the street-list the abbreviation Phys., while the title M.D. is altogether omitted. What is a non-professional person to understand by this? If there be any good reason for the distinction thus drawn, it follows that SAMUEL ASHWELL is an M.D. and not a Physician, while WILLIAM ADDISON is a Physician and not an M.D.! There is no *Membership* of the Royal College of Physicians; there are only Fellows, Licentiates, and Extra-licentiates: hence the letters M.R.C.P. signify nothing. It is clear that either one or the other of these gentlemen has been wrongly designated, and that an invidious distinction has been thus drawn for the misinformation of the public between two members of the profession who are in a legal point of view equal in status. Both have an equal right to the title of Doctor of Medicine, and each is a Physician in law. The editors of the Directory have, however, adopted that which we believe to be an erroneous assumption—namely, that the letters M.D. invariably represent a University *degree*, whereas the diploma of the Licentiate of the Royal College of Physicians confers in express terms the Doctorate of Medicine, and with this the *title*. They thus convey to the public the false impression that while an apothecary with a purchased parchment-title from some obscure German University, the walls of which he

may never have seen, is authorized to practise as a physician, a genuine English Physician, or Licentiate of the Royal College, is not an M.D. either by right, courtesy, or custom. Let us look to the consequences to which this artificial and unfounded distinction leads. Will our readers believe that that eminent member of our profession, NEIL ARNOTT, is thus deprived of his doctorate, while DENIS CRONIN, of Leicester Square, and R. J. CULVERWELL, are paraded as M.D.'s of Giessen? It might have been inferred that a rule which led to such inconsistencies could not be right; but the controllers of this publication appear to disregard all consequences, however absurd. We assert upon their own showing that Mr. DENIS CRONIN is only an *Apothecary* in Great Britain; he has no other legal title or status in this country, and in any act passed for the regulation of the profession we believe that he will not be recognized except as a Licentiate of the Apothecaries' Society. In Hesse Darmstadt he may be an M.D. and a Doctor of Medicine, but in England he is neither one nor the other, nor is he a "physician," and should he practise in the latter capacity, it is in defiance of the Charter of the Royal College of Physicians (the 14 and 15 Henry VIII. c. 5). His proper legal designation, out of the Duchy of Hesse Darmstadt, would be *Apoth.* and *German Doctor*. It is, therefore, we think, a matter of serious complaint against this publication, not only that men of high professional standing are misdescribed, but that the holders of German parchments have assigned to them, titles which give a false precedence. An M.D. of Giessen, whether he be an Englishman or a German, can no more claim to rank as a Doctor of Medicine or Physician in England, than a member of the Bar of Vienna can claim the title and privileges of an English barrister in the Courts at Westmin-

ster. By attaching the letters M.D., and in numerous instances even without naming the University, a false impression is conveyed to the public mind, and the *bonâ fide* English physician suffers. He is deprived of a title under which "English physicians" have been hitherto always recognized both by the public and the profession. This is a great piece of injustice, the notice of which has been forced upon us by letters which we have lately received from several correspondents. The profession cures these mistakes by not following the rules of the Directory, but the public are in the meantime deceived: for they look to the appended *letters*, and not to the place whence they have been derived, or the very peculiar circumstances under which they have often been obtained.

But the titles of foreign graduates, real or sham, are sometimes changed apparently in order the more effectually to impose on the public. Thus all the English graduates of the University of Paris enumerated in the Directory, including that eminent homœopath, PAUL FRANCIS CURIE, are styled M.D. The Parisian title is, however, D.M.P., and why is this conversion made in an *English* Directory? The title of M.D. is in all such cases wrongly assigned, and perverted from its true French representation. It, however, serves the purpose of assimilating it to the Oxford and Cambridge degrees: hence the latter, who as *graduates* are the only *legal* M.D.'s in England, are obliged in self defence to append Oxon or Cantab. to their names.

While we fully admit the value of this Medical Directory for many purposes, we altogether object to its conductors constituting themselves Censors of the qualifications of the profession. The distinction which they profess to make between a Physician and a Doctor of Medicine is frivolous and absurd;

but it is still worse on their part to exalt a German doctor, unrecognised in this country, above a Licentiate or Extra-Licentiate of the Royal College of Physicians.

In the absence of a Registration Act, it is open to them to deal fairly by the profession. The Medical Directory, as we take it, is an English publication intended for the use of British practitioners: it should therefore be confined to a description of the legal status of each individual whose name is recorded. It should not go out of its way to transform an English apothecary into an M.D. when no such title would be recognised or received in Great Britain; and at the same time, by dropping the titular letters, remove a British "physician" out of his proper class. If a guide for their future proceedings be required, let them consult any Act of Parliament: they will find that M.D.'s and Doctors of Medicine, whether of Giessen or of the remote University of Rio Janeiro, are altogether unknown. There are only three classes of medical practitioners admitted in English law—*Physicians, Surgeons, and Apothecaries*, and the law has expressly defined who are to be so considered. Let the abbreviations *Phys., Surg., Apoth.*, therefore, be used according to the *British* qualification of each practitioner; and if it were really a matter of importance to distinguish the Teutonic from the British M.D.'s, the former might be conveniently designated by their proper title—*German Doctors*. It is manifestly objectionable to treat the Licentiates and Extra-Licentiates of the Royal College of Physicians by one rule, and the Members of the College of Surgeons and of the Apothecaries' Society by another.

We are sorry to perceive that a writer in a contemporary journal has, like the editors of the Directory, adopted a view regarding the Licentiates and Extra-Licentiates of the Royal College

of Physicians which appears to us to be both unsound and unjustifiable. Thus the writer observes—

"We regret to acknowledge that the London College of Physicians *does* grant its license to others than such as possess the degree of M.D.; and, moreover, if it does not directly sanction, it certainly allows those in possession of its simple license to style themselves Doctor. To this rank they have no more right than have the Licentiates of the Apothecaries' Company, the Members of the College of Surgeons, or the Licentiates of the Pharmaceutical Society. The College of Physicians may create Physicians—*medici*; Universities alone can make Doctors—*doctores*."—MEDICAL TIMES.

The editor of this journal professes to be a great friend to the General Practitioners; but he appears to forget that, unless by the scandalous purchase of an M.D. degree from some foreign University, his suggestion would go to the extent of preventing a large number of deserving Englishmen, who must have been in practice up to forty years of age, from becoming associated with the Royal College of Physicians. Considering how the degree of M.D. has been notoriously obtained from certain Universities in hundreds of cases, and how it may still be procured without residence, and by an almost nominal examination, it is, we think, highly creditable to the College of Physicians that they should open the door to men who must by their years have well earned the honour of their diploma at the age at which they can legally claim it. According to our contemporary—for this is the practical consequence of his statement—the M.D.'s who are admitted in the University of Edinburgh at the mature age of 21, and the purchasers of the Giessen and Erlangen titles, are *the* individuals *par excellence* whom the Royal College of Physicians should select for their license, while they should reject the professional claims of such

men as NEIL ARNOTT and SAMUEL ASHWELL! Either the statement implies this, or it is without meaning; and we do not know any fact which could show in a stronger light the intrinsic absurdity of such a proposition.

Our contemporary asserts that this admission of medical practitioners unprovided with a University degree is an infringement of the spirit of the original charter of the College. We have looked through the whole of the charter (14 and 15 Hen. VIII. c. 5, confirmed by the 1 Mary, c. 9), and can find nothing to warrant this assertion. The charter nowhere restricts the examination, and therefore does not, as it is alleged, limit the conferring of the license on the real or sham graduates of Universities. We quote the paragraph referring to it:—

"Concessimus etiam eisdem presidenti et collegio, seu communitati, et successoribus suis, quod nemo in dictâ civitate aut per septem miliaria in circuitu ejusdem, exerceat dictam facultatem nisi ad hoc per dict' presidentem et communitatem, seu successores eorum, qui pro tempore fuerint, admissus sit per ejusdem presidentis et collegii literas sigillo suo communi sigillatas, sub penâ centum solidorum pro quolibet mense, quo non admissus eandem facultatem exercuit, dimidium inde nobis et hæred' nostris et dimidium dicto presidenti et coll-applicandum."

It will be perceived from this extract that the spirit and letter of the original charter are not infringed by admitting others than University M.D.'s to examination. The discretion is left with the College to compel *all* who practise medicine within seven miles of London to undergo an examination. When the University M.D. degree became a by-word, from its being granted to inexperienced youths, and from the fact that it was made an article of commerce, the "status of the Royal College" was surely not likely to be preserved by requiring such a document as

a preliminary qualification for the license: hence the College acted wisely in reverting to the terms of the old charter, which contains no such restriction.

Equally unfounded is the assertion of our contemporary, that a University *only* is legally authorized to grant the *title* of M.D. Here there is obviously a confusion between a title and a degree. Universities have the privilege of granting degrees; and a Chartered Corporation, unless there be an express prohibition to the contrary, may grant a *title* to designate the members belonging to it. This is not only law, but common sense. The titles conferred by all our scientific Societies have no other foundation than this. We deny that there is any Act of Parliament, or any law or custom, to prevent the Royal College of Physicians from conferring on their Licentiates and Extra-Licentiates the *title* of M.D. according to the terms of the diploma. Such details form no part of the Charter of incorporation, which does not even define the terms in which the license should be granted. A free and uncontrolled power of selection is conferred by this document; so that the College may, according to their pleasure, designate their licentiates M.D., M.R.C.P., or L.R.C.P., provided they do not assume to themselves the power of conferring degrees. The graduates of Universities, if they desire a distinction, are in duty bound, not merely to append the titular letters M.D., but the name of the University which granted the privilege. Hence there could be no confusion, except as it respects those who are ashamed to acknowledge the circumstances under which they have obtained a University degree. The terms of the diploma of the College of Physicians are very explicit on this head:—

"Et ei concessisse liberam facultatem et licentiam *tam docendi quam exercendi*

scientiam et artem medicam eidemque summis honoribus et titulis et privilegiis quæcunque hic vel alibii medicis concedi solent intra auctoritatis nostræ limites frui dedisse."

The simple question, therefore, is—Has the College of Physicians the power of granting such a *diploma*? It is not mentioned in the Charter, but we have never heard the right seriously disputed; and, if this be conceded, the terms "*docendi artem medicam*," without any quibble, plainly confer the doctorate of medicine on the holder of the license. He has therefore a clear and undoubted right to the title *Doctor Medicinæ*, and is as much entitled to append the letters M.D. to his name as if the power had been specially conveyed to the College by the Charter of incorporation. The custom of the profession has fully recognised this privilege, and we have never heard it seriously contested except by German and other University graduates, not being "physicians," who are envious of the privileges of the Fellows and Licentiates of the Royal College. It is a curious mark of the inconsistency of a certain class of reformers, that, while they condemn abuses in Colleges, they are disposed to defend propositions even when the absurdity of the conclusions to which they lead is palpable, and the propositions themselves are wholly opposed to the reforming spirit of the age. Thus it is argued that a youth of 21, who has seen no practice, but has merely graduated at Edinburgh, is qualified to *teach medicine*—i. e. he is a real M.D. or *Doctor Medicinæ*. A General Practitioner of forty years of age, and of probably fifteen years' standing in his profession, may become a "physician" by procuring the license of the London College; but, according to these quasi-reformers, he is not an M.D., and is not so well qualified to teach medicine (not being a University Doctor Medicinæ) as the young gentleman

of 21! It is much to the credit of many of these youthful graduates, that they decline to assume the title of "Doctor," although legally privileged, until years of practice have given them a better claim to it than that which they have derived from the University parchment.

MEDICAL STATISTICS OF BOSTON FOR 1849.

THE first Annual Report of our City Registrar of Births, Marriages, and Deaths, is just published. The number of births has been ascertained by canvassing the city for this express purpose. This work has been done faithfully, but the result is presumed not to be a perfect record. The number returned is 5,068, and it is thought by the Registrar that from three to five hundred more have occurred. The most remarkable feature in these returns is the birthplaces of the parents of the new-born children. Of these parents, only 438 fathers and 522 mothers were natives of Boston, while 2540 fathers and 2578 mothers were born in Ireland! Born in the New England States, including Boston, 1754 fathers and 1765 mothers; in foreign countries, including the above number born in Ireland, 3,140 fathers and 3151 mothers. There were 37 cases of twins.

The number of intentions of marriage recorded during the year, 2287; which is also less than the real number, as many are known to have gone out of the state to be married, to avoid the publicity attending a compliance with our laws, which require the intention to be published fourteen days.

The number of deaths for 1849, to which we have already alluded in the Journal, was 5079; including still-births, 5329. By omitting the still-births, and estimating the average population of the city at 132,000, the Registrar makes the mortality of the year 1 in 26, which is doubtless more correct than 1 in 24.53, as estimated in our former notice. Of these deaths, the number of natives of Ireland was 1368; natives of Boston, including children of foreign parents, 2454. Among the diseases, consumption stands at the head in fatality, notwithstanding the ravages of cholera. 644 deaths are attributed to that disease; cholera, 611; infantile diseases, 328; scarlet fever, 317; dysentery, 277; diseases of the bowels, 264; measles, 209; teething, 161; lung fever, 152; diarrhoea, 118.—*Boston Journal*.

COURSE OF LECTURES
ON
DISEASES OF THE HEART.

*Delivered at St. Vincent's Hospital during the
Session 1849-50.*

BY O'BRYEN BELLINGHAM, M.D.

Fellow of the Royal College of Surgeons in Ireland, and one of the Medical Officers of the Hospital.

LECTURE VIII.

EXAMINATION OF THE HEART IN DISEASE.

Examination of the heart in disease—Signs furnished by inspection of the chest, and the application of the hand—Impulse of the heart—Diminution of the impulse—Increase of the impulse—Alterations in the situation of the impulse—Sound produced by the impulse of the heart—Turgescence and pulsation, and of the jugular veins.

THE anatomy and physiology of the healthy heart having been dwelt upon at sufficient length, we have next to consider the heart in disease, and to describe the several methods of proceeding, in order to determine the nature, the situation, and the extent of the morbid changes. And here we shall find the advantage of the preceding details, inasmuch as we shall be in a position to recognise readily any alteration in the heart's impulse, either as respects its strength, or the situation in which it is felt; we shall be able to detect any difference in the extent and degree of the heart's superficial dulness, or any change in the character of its sounds.

In cases where the heart is diseased, or suspected to be so, several distinct methods of examination require to be employed; the eye, the touch, the ear, are each capable of affording us assistance in arriving at a diagnosis, and the indications afforded by each mutually assist the others. These methods of examination may for convenience sake be considered under the heads—inspection of the chest; palpation, or the application of the hand to the parietes; percussion; and auscultation—upon each of which it will now be necessary to delay for a short time.

Signs furnished by inspection of the chest, and the application of the hand.—Inspection of the chest,—in other words, the examination of the external surface of the thorax, and the application of the hand to the præcordial region,—should never be omitted; they are capable, alone, of affording positive information in several diseased conditions; they aid and assist our other

means of arriving at a diagnosis; and, as preliminary steps to other and more difficult methods of exploration, they can scarcely be dispensed with, if we wish to make an accurate examination.

As these two methods of physical examination mutually assist one another, they may be considered together. Thus, by inspection of the chest we determine the exact point at which the apex of the heart comes in contact with the parietes of the chest, and by the application of the hand we determine the amount and the strength of its impulse. By inspection of the chest we ascertain whether the two sides of the thorax are symmetrical, and we detect any protrusion in the præcordial region; by it we recognise unusual pulsation at any part of its parietes, in the large arteries which come off from the arch of the aorta, as well as in the jugular veins, or in the epigastric region; by the application of the hand we determine the strength and force of the pulsation; we judge of the frequency or slowness of the heart's action, and of the regularity and irregularity of its movements. By the application of the hand, likewise, we recognise the peculiar phenomenon known under the name of fremitus catale, or purring tremor; and by the same means we can detect friction between the opposed and roughened surfaces of the pericardium in inflamed states of the membrane.

Impulse of the heart.—The application of the hand to the præcordial region is necessary in order to judge of the strength or feebleness of the heart's impulse: with this view, the hand may either be placed directly upon the surface of the chest, or, holding the ear end of the stethoscope, we apply its opposite extremity to the part, when the extent to which the instrument is elevated, and the force with which this is accomplished, will give us a pretty accurate idea of the strength of the heart's impulse. This kind of mediate palpation is principally useful in hypertrophy, or hypertrophy with dilatation, of the ventricles.

The impulse of the heart varies, even in healthy individuals, according to the development of the chest, according to the size of the lungs, according to the fitness or leanness of the individual, according to the stature of the subject, and to the size of the abdomen. In the healthy subject, with a well-formed chest, the impulse of the heart is so slight as not to be perceptible to the individual himself, and is felt only at one point—viz. between the cartilages of the fifth and sixth ribs on the left side; that is, from one to two inches below the nipple, and to the sternal side of this point. When the parietes of the chest are much loaded with fat, the impulse is often scarcely perceptible to the hand; while in thin

persons it is evident also to the eye. In such cases, when the heart's action is vigorous, it will be perceived to be double; and this in certain states of disease becomes very perceptible.

In examining the heart, it is necessary to bear in mind that the impulse is somewhat stronger in the erect than in the recumbent posture; that in a forced inspiration the impulse is diminished, and felt slightly lower down than natural; a deep inspiration elevating the ribs without raising the heart in the same degree, while it depresses the diaphragm. That in a forced expiration the impulse becomes more perceptible, and is felt slightly higher up; a forced expiration depressing the ribs and elevating the diaphragm. It may therefore be necessary to make the patient vary his position, and to examine the heart both during inspiration and expiration. In some individuals the impulse is naturally weak; in others naturally strong: the same may be said of the pulse and of the sounds of the heart, although the parts are in a perfectly normal condition in each. As the impulse is increased by exercise, or exertion, or by mental excitement, we should be careful to examine the heart, suspected to be diseased, when the patient is perfectly calm and tranquil.

In some morbid conditions of the heart or lungs the impulse is either very slight, or altogether absent. In others it is so strong as to be disagreeable to the individual, and to be visible without removing the patient's clothes, and the extent of surface over which it is felt is much increased. In others the impulse becomes perceptibly and strongly double; and in others again the seat of the impulse is altered.

Diminution of the impulse.—Diminution of the impulse of the heart may depend either upon feebleness of the action of the heart, which may have its cause in disease or alteration of its muscular tissue, or in general debility of the system; or it may depend upon the apex of the organ being prevented from coming in contact with the parietes of the chest with sufficient force to communicate an impulse, owing to disease in the lungs or pericardium.

The impulse of the heart is circumscribed or feeble in softening of the heart, and in atrophy of its muscular substance with fatty degeneration of its tissue. In states of considerable general debility it is feeble. The impulse is diminished likewise in attenuation of the walls of the ventricles, with dilatation of their cavity. If the anterior margin of both lungs is emphysematous, and they overlap the heart, the apex may be prevented from coming in contact with the parietes, and the impulse

will be much diminished. In cases of considerable effusion into the sac of the pericardium, the impulse is absent altogether, or it is unequal and undulating, as if propagated through a fluid. In cases even of hypertrophy with dilatation of the ventricles, the impulse may be diminished, "it becomes a mere oppressed struggle," if the heart is overloaded with blood and the lungs are much congested.

Increase of the impulse.—Increase of the impulse of the heart, as a general rule, occurs under the very opposite conditions of the organ to those under which diminution of its impulse is observed, and in almost every instance has its cause in some morbid state of the heart itself. The impulse is stronger than natural in hypertrophy of the walls of the left ventricle, and it arrives at its utmost limit in hypertrophy with dilatation of the ventricles: in such cases the impulse is slow, gradual, heaving, double, and occasionally so violent as to shake the bed on which the patient lies. The character of the impulse of the heart thus becomes a most valuable sign of hypertrophy with dilatation: "the slow, progressive, heaving impulse could be produced by no other cause." In such cases, likewise, the extent of surface over which the impulse of the heart is felt is much increased, and the whole side of the chest is sometimes elevated by the movements of the organ. It is in this form of disease that the double impulse is so well marked, the diastole as well as the systole of the ventricles being accompanied by an impulse: this is sometimes termed the back stroke of the heart,—more correctly the diastolic impulse. The ventricles may, however, be hypertrophied, M. Piorry observes, without the impulse being much increased. He says, that in aged females at the Salpêtrière very little impulse is often felt, although the heart is frequently much thickened; while in nervous subjects with small hearts the impulse is frequently very strong. He is of opinion that increased impulse is to be considered "an indication rather of the force of the blow than of the thickness of the parietes of the ventricles."

In hypertrophy with a predominance of dilatation, the impulse, as Laennec observes, is abrupt, short, and knocking, and in the fits of palpitation the shock resembles the blow of a hammer. "The blow seems (as Dr. Hope remarks) to strike a small space: it expends itself, as it were, on the thoracic parietes, and does not communicate a heaving proportionate to its force." "It differs from the impulse of great hypertrophy, in the circumstance that in the latter the ventricles in a distended state seem to heave with their whole length

against the thoracic parietes, which yield to the effort; while in the former the point only of the heart seems to strike the parietes with a sharp, smart, accurately circumscribed blow, only capable of producing a sort of concussion rather than a real heaving."

The impulse of the heart is stronger than natural in the early stage of endocarditis and of pericarditis; likewise in attacks of palpitation from any cause; and it is apparently stronger when a morbid growth behind the heart protrudes the organ forwards, as in certain rare cases of aneurism in the descending portion of the thoracic aorta. The impulse becomes sharper and more knocking in nervous and hysterical subjects, particularly during fits of palpitation: in such cases it is often very troublesome to the patient, and is occasionally accompanied by perceptible sound, while its double character can not unfrequently be recognised.

Alteration in the situation of the impulse.—The situation at which the impulse of the heart is felt is not unfrequently altered by disease, either of the heart itself, of the lungs, or pleura, by the development of morbid growths in the cavity of the thorax, or by morbid or other changes in the contents of the cavity of the abdomen; and these alterations in the site of the impulse may be the result either of the increased volume which the heart itself attains, or of displacement of the entire organ. Thus—

In hypertrophy of the left ventricle with dilatation of its cavity, the heart being increased in length, its impulse will be felt lower down than natural, and more to the left side, and not unfrequently on a line with the axilla. In hypertrophy with dilatation of the right ventricle, the impulse will, for the same reason, be felt lower down and more to the right side than natural, and not unfrequently on a line with the xyphoid cartilage. In the former case the impulse is progressive, heaving, and strong, elevating the head of the observer, and is felt over a much larger surface than natural; in the latter the impulse is neither heaving, prolonged, or very strong, and is felt usually over a circumscribed space.

The entire organ is displaced laterally in cases of empyema, or where liquid to a considerable extent has been effused in the pleural cavity on either side; towards the left side when the right pleural cavity is its seat, and towards the right side when the left pleural cavity is its seat: in the latter case the impulse is frequently felt upon the right side of the sternum. The heart is pushed upwards, and the impulse is felt on a plane higher than natural, in

ascites, in cases of large ovarian or other abdominal tumors, in hysterical tympanitis, and the advanced stages of pregnancy. The heart is displaced slightly downwards in cases of emphysema of both lungs of long standing, and the impulse is felt on a plane lower than natural, not unfrequently in the epigastric region. In cases of effusion of fluid into the pericardial sac, the impulse is felt sometimes at one, sometimes at another part of the præcordial region. In individuals with narrow, deformed, or contracted chests, the impulse will be felt beyond its normal limits. In individuals, on the other hand, with broad and expanded chests, the site of the heart's impulse is usually circumscribed.

Sound produced by the impulse of the heart.—Although under ordinary circumstances sound is not produced by the impulse of the heart, and no shock or blow is given to the parietes of the chest by the apex of the organ during the ventricular systole—the intercostal space between the cartilages of the fifth and sixth left ribs being merely elevated by the apex of the heart in the gliding movement performed by it at this period of the heart's action—yet, under certain circumstances, sound is really produced by this act, which in certain rare cases is sufficiently loud to be heard without the stethoscope, and at a short distance from the patient, and is audible to the patient himself.

Corvisart only once witnessed this phenomenon. Laennec states that in at least twenty instances which he met, this sound was sufficiently loud to be audible at a distance of from two inches to two feet from the patient's chest. "In only three or four of these cases at the utmost, organic disease of the heart existed; in all the others the palpitation was purely nervous. Bruit de soufflet and freuissement often existed in a slight degree in the heart, but particularly in the arteries of those who presented this phenomenon."

In order that sound should be produced by the impulse of the heart, the organ must act strongly, the subject must be thin, the heart must be a good deal uncovered by lung, and the apex of the organ must come in contact with the rib or its cartilage with sufficient force to produce sound.

According to Dr. Hamernck, "all true heart-sounds are heard by mediate or immediate auscultation only." "This sound, however, is heard at a distance from the chest, and is considered by him to depend upon the motion imparted to the surrounding elastic tissues by the heart's systole." According to Dr. Hope, the manner in which the sound is produced is as follows: "The heart in gliding forwards and up-

wards during its systole strikes with its apex against the *inferior margin* of the fifth rib, and thus creates an accidental sound, attended with *cliquetis* when the blow is smart. It may be prevented at pleasure, by pressing the edge of the stethoscope, or any thing else, into the intercostal space, by which that space is put internally on the same plane as the rib, over which the heart then glides without catching." He adds, that "he has never found the sound to occur in any but the meagre, because in the well-conditioned the intercostal spaces are full and resistant; and consequently the edge of the rib is not exposed."

"I infer," Dr. Hope observes, "that the *tinntus* itself proceeds simply from reverberation of sound within the cone of the stethoscope." Dr. Williams, in reference to the same point, remarks—"The metallic clink originates in the ear of the observer, and has nothing to do with the heart, further than that it is excited by the blow which the heart communicates to the ear. We may hear the very same note by laying the ear flat upon a table, and tapping the under side of the table just opposite to it. I believe this to be the proper note of the tympanum. We often hear it on auscultation, and when once aware of it, it is easily recognised as belonging to the observer, and not to the patient. It is easily produced when the heart strikes against the ribs, and the external knocking sound is added to the intrinsic systolic sound." In order to hear the metallic clink, M. Bouillaud says "it is better not to employ a stethoscope, but to apply the ear immediately upon the patient's chest." "This sound (he observes) being sometimes heard with the naked ear when it would be inaudible with the stethoscope."

Turgescence and pulsation of the jugular veins.—Among the signs which are evident on inspection of the chest, and which accompany the advanced stage of some forms of cardiac disease, a state of permanent turgescence or distension of the jugular veins, with or without pulsation, is by no means unfrequent. The former is the most common, and may occur in any case in which an impediment exists to the free passage of the blood through the right side of the heart. The latter is observed in cases in which, in addition, the tricuspid valve imperfectly closes the right auriculo-ventricular orifice, and free regurgitation into the auricle is permitted at each systole of the right ventricle.

Turgescence and pulsation of the jugular veins were first noticed by Lancisi as signs of cardiac disease. He referred them to dilatation with hypertrophy of the ventricles, or, as it was then termed, "aneurism

of the heart." Corvisart had little confidence in them as signs of disease of the right side of the heart. Laennec, however, regarded the turgescence without pulsation of these veins as a frequent attendant upon dilatation of the right cavities of the heart, and he says that "pulsation in the same veins was present in every case which he had met with of considerable hypertrophy of the right ventricle."

The internal and external jugular veins receive the blood from the interior and exterior of the head, from the face and neck. Now if there is any impediment to the free passage of this fluid through the right side of the heart, whether depending upon disease in the right or left side of the organ, or of the lungs, these veins become distended and turgid. If, in addition, the tricuspid valve does not perfectly close the right auriculo-ventricular orifice, a portion of the blood, at each systole of the right ventricle, instead of passing into the pulmonary artery, will be transmitted backwards into the right auricle, and will re-act upon its contents, and through it upon the blood descending by the superior cava and its branches, when a pulsation will be communicated to the jugular veins at each systole of the right ventricle, which will persist although pressure be made upon the vein above it.

Turgescence of the jugular veins.—The diseased condition of the heart in which turgescence of the jugular veins is most frequently observed is dilatation of the right auricle and ventricle, with or without hypertrophy of the same parts. It is, however, by no means to be considered as a symptom belonging exclusively to this form of disease, for it is often the result of obstruction, or regurgitant disease at the left side of the heart. It may accompany any impediment to the free circulation of the blood through the cavities of either side of the heart. It is observed sometimes in aneurism of the arch of the aorta, as well as in diseased conditions of the lungs, accompanied by obstruction to the pulmonary circulation. The turgescence is usually limited at first to the external jugular veins, particularly on the right side: it is not constant, and can always be removed by compressing the vein above. Eventually both the internal and external jugular veins become distended and turgid, sometimes to an extreme degree. This state is permanent, though it can still be removed by pressure upon the vein higher up. In some few cases, the veins, in addition to being dilated, become tortuous, and present the appearance with which we are familiar in the varicose state of the veins of the lower extremity.

Pulsation of the jugular veins.—The

veins in which pulsation is observed are the internal jugulars, those vessels not being provided with valves like the external. The pulsation is always most evident immediately above the clavicles, and it may extend half-way up the neck when the latter is short; but I have never found it to reach higher. It is usually best marked on the right side, and is frequently perceived upon both sides, and sometimes, though rarely, only on the left side. The pulsation is too feeble in the great majority of cases to be felt by the finger, but, in several instances which have come under my own observation, a pulsation was communicated to the finger placed lightly upon it. This could not be confounded with the pulsation of the artery underneath, which is likewise generally increased at the same time; as, it was very feeble, was perceptible only on slight pressure, and disappeared when this was increased, when the impulse of the artery alone was felt.

The movement in jugular pulsation is rapid, vermicular, and double, the backward current of blood forming the first and strongest movement, and the direct current its second and slighter movement. According to Dr. Sibson, there is in the healthy state "a constant visible pulsation, both in the deep and superficial jugular veins, which pulsation, though perfectly visible, cannot be felt." It is much diminished, and in many persons rendered invisible, during a deep inspiration. "The mere existence of jugular pulsation (Dr. Sibson observes) is anything but an indication of disease, either in the pulmonary valves, or elsewhere." "In those diseases (he adds) where the flow of blood through the lungs and heart is impeded, the jugular veins contain more blood, and their pulsations are more visible than in health; but where the impediment is extreme, the veins are in a state of constant distension, and no pulsation is visible."

Pulsation of the jugular veins is present in every case in which the tricuspid valve imperfectly closes the right auriculo-ventricular orifice, and in which free regurgitation occurs at each ventricular systole, provided the walls of the right ventricle are sufficiently strong to communicate a backward impulse to the current of blood which descends by the jugular veins. Hence it is almost always observed in hypertrophy with dilatation of the right cavities of the heart. Pressure upon the vessel between the site of the pulsation and the heart is always sufficient to stop it.

Reviews.

Ueber die Unzulässigkeit der Spinal-Irritation als besonderer Krankheit, nebst Beiträgen zur Semeiologie und Therapie des Rückenschmerzes. Von Dr. A. MAYER. 8vo. pp. 351. Mainz: 1849.

On the Non-existence of Spinal Irritation as a separate disease; with contributions to the Semeiology and Therapeutics of Spinal Pains. By Dr. A. MAYER. Mentz.

THE author informs us that at a professional meeting at Oppenheim, in 1844, the term spinal irritation being frequently used, as expressive of a special form of disease, and himself failing to obtain a satisfactory explanation of its meaning from those by whom it was employed, he was led to the investigation of the subject, whence he has arrived at the conclusions contained in the work before us, and expressed by its title.

This work is divided into two parts. The first part is devoted to an examination of Stilling's views on spinal irritation, and of those of various German, French, American, and British authors, on the same subject. We think the author over-estimates the influence of any theories of spinal irritation on the views of British practitioners, and our opinion is confirmed by the fact that he is able to cite but few names of authors of repute in England.

The second part of the work treats of the semeiology and therapeutics of spinal pains (*Rückenschmerzen*) in general.

The author divides all disorders attended with spinal pains, into three groups:—

"1st group.—The seat of the disease being either the spinal marrow or its membranes, the spinal nerves, the vertebral column, or its ligaments, the muscles, or, lastly, the skin. The pain in these parts is often insignificant as compared with that of distant organs, and is not in proportion to other morbid phenomena. These are excited or increased by pressure over some one spot on the spinal column, in conformity with the laws of eccentric phenomena. The spinal pain is here one of the prominent symptoms, and must be taken into account in the treatment."

"2nd group.—As in the preceding group

the diseases originate in the spinal marrow, or the vertebral column and some of its adjuncts, so in the present group the morbid cause exists remote from the spinal cord, and the spinal pain proceeds from the remote disease by the means of irradiation. The pain has this peculiarity, that the patients complain of its severity, and that it is relieved by pressure. Pressure on the vertebral column does not excite or increase the pain, neither does it exert any influence on other organs. In a therapeutic point of view this pain is of no importance: it disappears with the original disease.

"3rd group.—In this group the spinal pain and other diseases are the concurrent effects of one and the same cause. Pressure increases or excites pain locally, without inducing other morbid phenomena, unless there be present a generally augmented irritability of the nervous system. In this group, also, the pain is not a symptom of great importance with reference to treatment." (p. 242).

The author next traces the individuals, of these not very definite groups, through a series of cases of congestion of the spinal marrow and its membranes; of inflammation of the spinal cord and its membranes; of hæmorrhage into the spinal canal; of softening of the spinal cord; of disease of the vertebra; of intercostal neuralgia; rheumatism, tetanus, gastric derangements, hysteria, typhus, colic, cholera, hooping-cough, croup, &c.

Dr. Meyer has undoubtedly made the most of his subject, although, notwithstanding that his labours have grown to the extent of three hundred and fifty closely printed pages, he announces the present work as merely preliminary to a more extended treatise on the same subject. We cannot but hope that the talents and industry herein shown, may be diverted into some other channel, more useful to the profession, and more profitable to the author.

A few Words on Kinesipathy, or Swedish Medical Gymnastics: the application of active and passive movements to the cure of diseases, according to the method of H. P. Ling, and on the importance of introducing mechanical agency into the practice of medicine. By AUGUSTUS GEORGI. Pamphlet. pp. 76. London: Baillière. 1850.

THIS pamphlet sets before us another new "system" to cure all maladies. The plan of subduing disease by specific

active and passive movements had its origin with the Swedish Professor Ling, whom the author ranks with Hahnemann and Mesmer among the benefactors of mankind. Ling expounded the chief points of the philosophy of gymnastics as applicable to the treatment of disease, in a work entitled "*General Principles of Gymnastics*," published at the request of the Swedish Parliament. Ling the philosopher is also Ling the poet, who sings the political life of the Scandinavian people. We mention this here, because it may, perhaps, in some measure account for the preponderance of imagination over judgment in Ling's philosophy. Of the former we have not the means of forming an opinion, as Augustus Georgii has not favoured his readers with any of Ling's effusions in verse, though enough of prose is given.

We proceed, then, to exhibit the principal features of Ling's system, which he has named *Kinesipathy*.

Arguing from the well-known fact that the nutrition of muscles is augmented by exercise, and, from the converse, that atrophy results from prolonged inactivity, Ling was led to make observations on the effects of muscular movement, and external applications, on internal organs. "The principal passive movements employed are pressure, friction, percussion, vibration, rotation, ligature, — movements and positions which may either prevent a congested state of an organ, or promote a transient stasis, &c. &c." (p. 39.)

The following extract illustrates some of Ling's therapeutic views:—

"A vibration or percussion gently applied to the integuments of the head is transmitted to the brain and its tissues; a fresh impulse is thereby imparted to its capillaries, the pressure of the venous blood removed, and its course towards the heart facilitated. If a similar percussion be applied to the thorax, the effect will be transmitted to its viscera, and the activity in the veins and absorbents of the lungs or of the heart increased. Pressure or friction may be applied to the abdominal organs, the stomach or its nerves, the liver, the spleen, to the nerves of the bladder, rectum, &c., or to a main blood-vessel, artery, or vein, or merely to the surface of the skin." (p. 40.)

Certain accidents, in the shape of *arguta baculina*, which are apt to occur in the best-regulated scholastic establishments, are proved, then, not to

be without their physical benefits after all.

The effects of passive movements are said to be,—the acceleration of the blood through the capillaries; the increased action of the absorbents,—sedative to an organ in a state of irritation; depletive to a congested organ; excitant to an organ the vital activity of which is depressed. In fact, they nearly resemble those of the well-known hair-oil which was warranted to make the hair grow where it ought, and prevent its growing where it ought not.

The beneficial effects to health and disease derivable from various forms of exercise have been known and admitted from the days of Adam. There is, then, little need, we think, for another "*pathy*" to enforce what is not denied. Not even an array of cases or of marvellous cures will at present induce us to recommend our readers to seize their patients' limbs or bodies, and twist and pummel them in divers extraordinary modes, which we find advised by the expositors of LINGISM.

Proceedings of Societies.

PATHOLOGICAL SOCIETY OF LONDON.

DR. LATHAM, PRESIDENT.

April 1, 1850.

Ruptured Heart.

MR. COULSON exhibited a ruptured heart from a woman seventy-six years of age, who, after walking rather quickly about thirty yards, felt faint, and died in less than five minutes. Up to this time she had been in apparent good health. On examination, the pericardium was found thin, and distended with a large clot of dark coagulated blood, and about four ounces of bloody serum. At the apex of the heart, on its posterior surface, there was a small fissure which communicated with the left ventricle. The heart was also fatty, particularly the right ventricle.

Dr. Richard Quain, at the request of the President, undertook to make a microscopical examination of the heart, and report the result at the next meeting of the Society.

Dr. PEACOCK exhibited a preparation from a

Case in which Empyema opened through the Lungs, and in which Paracentesis Thoracis was performed.

A man, æt. 30, applied at the City Hospital for Diseases of the Chest, in June 1849, presenting the signs of a large accumulation of fluid in the right pleura. The breathing shortly became very difficult, with severe suffocative cough, soon followed by expectoration of large quantities of thick purulent matter. The chest was punctured with a trochar two inches below and to the right of the nipple, between the 6th and 7th ribs, and 70 ounces of thick matter were removed. So soon as the fluid ceased to flow freely, the aperture was closed. On the 26th, pain and tumefaction were felt about the puncture, and an abscess having formed, was opened on the 2d July, and a small quantity of pus escaped. On the 16th a trochar was again introduced at the same point, and about 20 ounces of matter were removed. The operation was again repeated on the 26th, but near the lower angle of the scapula, and six ounces of matter removed. The effect of each operation was most satisfactory; the cough and expectoration became much less, and the dyspnoea greatly relieved. The last puncture healed readily; the first one continued to discharge matter till his death, or, if it closed for several days in succession, the cough, expectoration, and dyspnoea recurred. He entered the Royal Free Hospital shortly after the last operation, where he improved greatly. He left in September. Shortly afterwards he was found much worse, the opening giving exit to a large quantity of very fetid pus. He suffered from diarrhoea; abdomen tense, and containing fluid. He went into St. Thomas's Hospital in October, and died 4th of January. On examination, the right pleura contained a large quantity of thick and very fetid pus, with air. The lung was adherent above to the sternal end of the clavicle, and below to the centre of the diaphragm; so that, instead of being compressed against the side of the spine, it was situated behind the right side of the sternum. On its right side and near the base was an ulcerated space, about the size of a sixpence, marking the seat of the communication between the pleura and lung. It was, however, closed, though a probe readily passed to the point along the bronchi. The bronchial tubes of the right lung were very greatly dilated. Liver coarsely granular and fatty. The aggregate glands of intestines were ulcerated.

Latterly, the signs of the presence of air and liquid in the chest were very marked; and shortly after the first operation, though no air had entered by the trochar, similar evidences were afforded when he lay upon

the back, but entirely disappeared when he was in the erect position. The disappearance of the signs of air in the cavity under these circumstances was ascribed to its quantity having been small, and to the peculiar displacement of the lung.

Also, a specimen of

Primary Cancer of the Lung.

A woman, *set.* 43, though subject to habitual cough, had been seriously ill only six weeks; complained of pain in the chest, difficulty of breathing, and cough. She was much prostrated, and had the peculiar complexion of a person labouring under malignant disease. There was entire dullness on percussion at the upper part of the left side of the chest, and extremely feeble inspiratory, and very prolonged expiratory, sounds were there heard. She was admitted into St. Thomas's Hospital, under Dr. Peacock, December 8th, and there got rapidly worse; the difficulty of breathing extremely urgent; the face livid, and the integuments of face, neck, arms, and chest very oedematous. Severe pain in the chest, and a frequent cough, with expectoration of a small quantity of glairy fluid. A band of hard and enlarged glands extended up each side of the neck, and the left lung became almost impermeable to air. She died December 27th.

Examination.—There remained great oedema of the upper parts of the body. A tumor the size of the fist was found behind the upper part of the sternum and the sternal end of the left clavicle, and this was in connection with masses of carcinomatous matter embedded in the upper part of the left lung, and extending along the bronchus to the bifurcation of the trachea, and down the posterior mediastinum. In the lung the divisions of the bronchus were almost obliterated, and the branches of the pulmonary artery were flattened and compressed. The pulmonary veins were entirely obliterated, and their cavities closed by coagula. The tumors partly enclosed and pressed upon the lower part of the trachea and the aorta, and protruded into the cavity of the pericardium. A large vein, probably the left vena innominata, was entirely enclosed by the tumors, and its cavity obliterated by fibrinous coagula. The tumors had a soft elastic feel and white colour, and when cut across exuded a large quantity of creamy fluid containing very small angular or oval cells, with nucleoli embedded in a delicate fibrous tissue, with the usual products of inflammation.

Case of Ruptured Bladder.

Mr. SOLLY exhibited a case of ruptured bladder. The accident was occasioned by a blow on the abdomen, the patient not hav-

ing made water for five hours previously. He was admitted into St. Thomas's Hospital seventeen hours after the accident. About two quarts of urine were drawn off.

Post-mortem examination, Feb. 26th, 1 P.M.—Head not examined. Thoracic viscera healthy. Abdomen: the peritoneum covering the abdominal viscera generally, but more particularly the small intestines, was irregularly congested in patches; and on the surface of some of the congested portions was a small quantity of recent lymph, in thin adherent flakes; this was more particularly seen on the convolutions of the small intestine contained in the pelvic cavity. The parietal peritoneum was healthy, with the exception of slight patches of congestion. In the peritoneum, over the posterior part of the bladder, was a longitudinal rent of an inch and a quarter in length, corresponding to which the muscular and mucous coats of the bladder were lacerated to the same extent; so that a catheter readily entered the peritoneal cavity. The peritoneum in the immediate neighbourhood of the wound, from half to three-quarters of an inch beyond its edges, was coated with a layer of adherent plastic lymph; the membrane was congested for an inch or more beyond the lymph, but there were no other indications of peritonitis. The cavity of the peritoneum contained from two to three ounces of what appeared to be urine, rendered turbid by the admixture of a small quantity of lymph, of which a little floated in the fluid. The bladder was firmly contracted. The thick edges of the wound were coated with adherent black coagulum. Liver and kidneys healthy. Mr. Solly remarked that in a similar case he should puncture the *pelvic cul-de-sac* of the peritoneum, as recommended by Harrison, of Dublin.

Ten Cases of Ruptured Bladder.

Mr. PRESCOTT HEWETT, in connexion with the last case, brought forward ten cases of ruptured bladder, which, with one exception, occurred at St. George's Hospital within the last few years.

The *first* was a specimen of extensive rupture of the apex of the bladder into the cavity of the peritoneum, from a man, *set.* 35, who lived two days after the accident. On his admission into the hospital, under Mr. Hawkins, a catheter was passed, and a large quantity of bloody urine drawn off; he was then in a state of collapse, from which he never rallied. The urine, which continued to be bloody, was always drawn off without any difficulty. At the post-mortem examination, extensive fracture of the pelvis was discovered, and this laceration of the bladder, which measured about two inches in length, and an inch and a half

in breadth. The bladder itself was contracted, and in its cavity were some small clots of discoloured blood. No marks of inflammation were found in the peritoneal cavity. An ounce only of turbid fluid was discovered in the *cul-de-sac*, between the bladder and rectum. The other parts were healthy.

The *second* specimen was also one of rupture of the bladder into the peritoneal cavity, taken from a woman, whose husband, in a quarrel, threw her down, and knelt upon her abdomen with great force. She immediately became sensible of having sustained some severe internal injury, and died twenty-four hours afterwards, in excruciating agony. In this case there were two lacerations: one of which, about half an inch in length, led into the cavity of the peritoneum; and the other, about two inches in length, into the cellular tissue of the pelvis. The preparation is in Mr. Caesar Hawkins's museum.

The *third* specimen was one of rupture of the fore part of the bladder, immediately behind the pubes, caused by a man jumping on the abdomen of the patient when he was on the ground: he lived twenty-three days after the accident. *Æt.* 50, he was admitted into the hospital, under Mr. Tatam, two days after the injury, with an anxious countenance, and great pain and tension over the lower part of the abdomen, accompanied by great difficulty in passing his water. A catheter was passed, and a pint of bloody urine drawn off. The necessary treatment was adopted, and he appeared to be going on pretty favourably for some days, at the end of which time three distinct tumors, presenting evident but deep-seated fluctuation, made their appearance: one of these tumors was in the mesial line, immediately above the pubes, and the other two in the iliac regions. On the twelfth day after his admission, a free incision was made into the lower part of the left iliac region, letting out about three pints of fœtid pus, with large sloughs. This was followed by a marked amendment, which lasted but a few days. The wound put on an unhealthy appearance, and the urine, which had for several days been passed without inconvenience, now flowed freely through the wound in the left iliac region. At the post-mortem examination, the peritoneum was found extensively stripped off from the parts in the neighbourhood of the bladder, as well as from both iliac fossæ, and from the walls of the abdomen, as high as the umbilicus. The cellular tissue in these various regions was in a sloughy state, and filled with large quantities of foul matter. The bladder presented, in its fore part, a rupture of about an inch in length and half an inch

in breadth, which led into a perfectly circumscribed cavity in the surrounding cellular tissue, the walls of which were so thick and so well formed, that, at first sight, it appeared like one of the sacculi so frequently met with in this organ. Towards the lower part of this cavity the wall of the cyst had, however, become detached from the margins of the rupture, so that here there was an opening through which the tip of the little finger was easily passed into the cavity of the bladder. The bladder itself was very much contracted, and its mucous membrane, of a dark colour, was in various parts covered with lymph containing a sandy deposit.

The *fourth* was also a specimen of rupture of the fore part of the bladder into the cellular tissue; in connection, however, with fracture of the pelvis. The patient, *æt.* 12, was admitted, under Mr. Cutler, in a state of collapse, some twenty hours after the accident — heavy iron railings having fallen on the lower part of the abdomen. No urine having been passed, a catheter was introduced, and a small quantity of bloody water was drawn off. The belly became tympanitic, and tension, swelling, and redness made their appearance in the lower part of the abdomen, in the scrotum, groins, and upper part of both thighs. These symptoms were soon followed by delirium and low fever, and he died six days after the accident. At the post-mortem examination, the bladder was found to be ruptured in two different places, in its fore part. The margins of the ruptures were sloughy, and sufficiently large to allow of the passage of a large bougie. Urine had been extensively infiltrated into the cellular tissue of the pelvis, and some of it had made its way into the upper part of both thighs, scrotum, &c. by passing through the obturator foramina. Large sloughs existed in various parts; the pelvis was extensively fractured, and a small quantity of blood was found in the cavity of the peritoneum.

The *fifth* specimen was one of rupture of the lateral part of the bladder into the cellular tissue, in connection with extensive injury of the pelvis. The patient, a middle-aged man, was under Mr. Hawkins, and died twenty-two hours after the accident. The laceration, about one inch in length and half an inch in width, was situated on the left side of the bladder, and led into the sub-peritoneal cellular tissue, where there was extensive effusion of bloody fluid. The urine, which was drawn off shortly after the patient's admission, was bloody.

The *sixth* case was one of rupture of the neck of the bladder, in connection with extensive fracture of the pelvis, from a man, *æt.* 38, who was admitted under Mr. Keate,

and died five days after the accident. The two anterior thirds of the neck of the bladder were completely separated from the prostatic portion of the urethra. The cellular tissue of the pelvis, as well as that in the hypogastrium, iliac regions, upper part of both thighs, and right side of the scrotum, was in a sloughy state, and infiltrated with pus and urine. The extravasation was traced, on the right side, through the internal ring and inguinal canal down into the scrotum; but there was no extravasation towards the perineum. The bladder itself was extensively inflamed, its mucous membrane being of a dark colour.

The *seventh* was a rupture of the bladder in connection with extensive laceration of the symphysis pubis. The rupture, which was on the right side of the organ, was large enough to admit a good-sized quill; it led into a small perfectly circumscribed cavity, formed in the surrounding cellular tissue by the effusion of lymph. Beyond this adventitious pouch the cellular tissue was extensively infiltrated with sanious fluid. A little above this rupture there existed appearances which looked like a smaller rupture blocked up by lymph. The mucous membrane of the bladder was inflamed, and in patches covered with lymph. The patient, *æt.* 32, was admitted under Mr. Keate, the wheels of a chaise, out of which he had fallen, having passed over the lower part of the belly, some twelve hours before his admission. The urine which was drawn off was bloody; pain and tension of the belly soon made their appearance, typhoid symptoms set in rapidly, and he died on the 4th day.

The *eighth* was a rupture of the fore part of the bladder, leading into the sub-peritoneal cellular tissue, in connection with extensive injury of the pelvis and dislocation of the hip, produced by a piece of timber falling on the patient's back. The man, *æt.* 32, was admitted under Mr. Hawkins, and lived four days after the accident. Shortly after his admission into the hospital, the cellular tissue of the scrotum, perineum, and lower part of the abdomen, began to swell, and then assumed a dark colour. A catheter was passed into the bladder at three different times, but no urine was found there. Mr. Hawkins having subsequently introduced a catheter, made a free incision into the urethra, and several others also into the inflamed parts, through which urine escaped freely. The wounds ultimately took on a sloughy character, and he died in a low muttering delirium. Besides extensive fracture of the pelvis, there was a rupture in the fore part of the bladder, immediately behind the symphysis pubis, of the size of the end of the little finger. Between the bladder and

pubes there was a large cavity, containing coagulated blood, urine, and pus, the peritoneum being stripped off nearly as high as the umbilicus. With the exception of some slight adhesions between this part of the serous membrane and the omentum, there were no traces of inflammation about the peritoneum.

The *ninth* was a rupture of the bladder in its fore part, just below the reflexion of the peritoneum. The laceration was about an inch in length, and had given rise to extensive infiltration of urine and blood into the surrounding cellular tissue, the peritoneum being stripped off from the wall of the belly as high as the umbilicus. The patient, a man *æt.* 46, was admitted under Mr. Hawkins, having been kicked by a horse on the lower part of the belly about five hours before. The urine which was drawn off was mixed with blood. Rigors and great pain in the belly soon supervened, and he died fifty-eight hours after the accident.

The *last* was also a rupture of the bladder external to the peritoneum, but in connection with separation of the symphysis pubis and fracture of the pelvis. The bladder was ruptured immediately behind the pubes. The man, *æt.* 34, was also under Mr. Hawkins; he had fallen from a great height, and died two hours after his admission into the hospital.

In the observations on the preceding cases, attention was drawn especially to the following points:—In two of these ten cases there was no injury of the bones; in eight, the pelvis was extensively fractured. In two cases the bladder was ruptured into the peritoneum (one being with fracture of the pelvis, the other without). In eight cases the rupture was into the cellular tissue of the pelvis; in these eight cases the bladder was ruptured in its fore part in five, in its lateral parts in two, at its neck in one.

Both the cases into the peritoneum were most interesting; the one from its rarity, the injury having occurred in a woman, of which there are very few cases indeed placed on record; the other, from there being so small a quantity of fluid found in the peritoneum, merely an ounce, and yet the rent in the bladder was large enough to admit of the passage of the two first fingers, as well as from there being no trace of inflammatory action about the serous membrane.

The variety of points at which urine extravasated into the sub-peritoneal cellular tissue might show itself was also well illustrated in some of these cases. In one, the patient living twenty-three days, large abscesses made their appearance above the

pubes, and in both iliac fossae. In another, in addition to these regions, the scrotum and perineum became extensively infiltrated. In a third, the right side of the scrotum was the part principally affected, the urine having passed through the right internal ring, and down the inguinal canal. In a fourth, the upper part of both thighs was affected, the urine having made its way through the obturator foramina.

Lastly, the reparative efforts sometimes made by nature in accidents of this kind were also well shown. In a patient who lived five days after the accident, the cellular tissue in the immediate neighbourhood was condensed by lymph, forming a species of pouch connected with the margins of the rupture. In another case, living twenty-three days after the injury, the surrounding cellular tissue was so condensed, and so firmly attached to the margins of the rupture, except at a small point, that the secondary cavity thus formed presented the appearance of a sacculus of the bladder which had given way. With regard to the point where the lymph was detached, Mr. Hewett thought this appearance was due to the tearing off of the false membrane during some efforts made by the patient: the history of the case, he considered, showed this. An aggravation of symptoms suddenly takes place, and the urine, which for several days had been passed without inconvenience or effort, now makes its appearance in the incision in the iliac fossa, and henceforth flows freely through this opening.

WESTMINSTER MEDICAL SOCIETY.

April 6, 1850.

DR. MURPHY, PRESIDENT.

On the alleged frequency of Ulceration of the Os and Cervix Uteri—Speculum Practice.

DR. TYLER SMITH read a very valuable practical paper on this subject. This paper has since been separately published,* and from this publication we make the following abstract:—

Mr. Whitehead, of Manchester, in his work on "Abortion and Sterility," states that, of 2000 women whose cases he investigated on their application to the Manchester Lying-in Hospital, "1116 had the whites at the time the inquiry was made, and a considerable number more had suffered under a similar ailment at some former period. In 936, or eighty-three per cent., the discharge bore undoubted

evidence of the presence of pus, or of sanies; and in some instances it was more or less mixed with blood." Mr. Whitehead traces these discharges to "disease of the lower part of the uterus, this disease being found to exist in almost every instance;" and he further declares that "this lesion of structure constitutes the true pathological seat of leucorrhœa, and of all its associated phenomena." Dr. Henry Bennet states, in his recent work on "Inflammation of the Uterus and its appendages, and on Ulceration and Induration of the Neck of the Uterus," that of three hundred cases presenting "uterine symptoms," among the patients of the Western Dispensary, he found that "243 were suffering from decided inflammatory disease of the cervix, or its cavity; and that in 222 ulceration was present." Thus, in Mr. Whitehead's cases, in 936 out of 1116 cases of leucorrhœa, the discharge was purulent or ulcerative; and in Dr. Henry Bennet's cases, 222 out of 800, or more than two-thirds, were also suffering from uterine ulceration. Dr. Bennet states that the same proportions are preserved in the cases he has treated in private practice.

It is well known that this is widely at variance with the experience of previous observers in this country. Does this discrepancy arise from the superior modes of investigation adopted by the authors I have quoted, or does it happen from some misapprehension as to what really constitutes ulceration of the os and cervix uteri? Is there simply some mistake about the nature of ulceration, or is the difference explained by the more general use of the speculum?

Practising as a physician-accoucheur, I must get the same class of patients as those treated by Mr. Whitehead and by Dr. Bennet. I am in the habit of using the speculum in cases of obstinate leucorrhœa in married females, and I trust with a desire to observe truly and faithfully, but I do not myself find uterine ulceration,—at least not what seems to me to warrant this term,—so frequently as Dr. Bennet, Mr. Whitehead, and some other gentlemen who have written upon the subject, in leucorrhœal cases, purulent or muco-purulent. I find inflammation, engorgement, induration, excoriation, patches of aphthæ, epithelial abrasion, and granulation, often enough, but very seldom what I could call ulceration, in non-malignant and non-syphilitic cases.

After giving a quotation from Dr. Bennet's description of ulceration, Dr. Smith says:—

If we consider excoriation or abrasion as genuine ulceration, probably no woman ever passes through life without suffering from this form of disease. In the virgin

* Lancet, April 20.

uterus, the circulation is frequently modified by the recurrence of menstruation, ovarian irritation, mental emotion, the varying conditions of the bladder and rectum; and in constitutional ailments, the vaginal and uterine secretions, in common with the other secretions of the body, are frequently depraved. Excoriation and abrasion of the mucous membranes are easily accounted for under such circumstances. Menstruation alone, in the turgidity of the uterus and ovaria, before the catamenial flow is established; in the exudation of blood from the surface of the uterus; and in the perforation of the peritoneal membrane for the elimination of the ovule from the ovary, trenches very nearly upon pathology. The slightest divergence from the ordinary function merges into disease.

In married women, and those who have borne children, other prejudicial causes in addition to these are in operation: such are the mechanical irritation of coitus, the risk of lacerations of the os uteri during the passage of the child in parturition, and the state of the uterine orifice which obtains after labour, and the return of the organ to quiescence. After labour, the orifice of the uterus does not contract smoothly, so as to leave the os uteri regular and even, but it becomes puckered and contracted unevenly. In irritable conditions of the mucous membrane of the uterus and vagina, or in a morbid state of the utero-vaginal secretions, these folds or corrugations are very liable to be chapped or excoriated, and I believe this is often mistaken for ulceration. All these, and other causes which I might enumerate, explain the frequency with which the os uteri deviates, in colour, volume, and secretion, from the strictly healthy standard. In fact, we may compare the upper part of the vagina to the fauces, which is seldom found perfectly healthy in any subject who may be examined. Some of the indurations and enlargements of the os and cervix uteri appear to resemble enlarged tonsils, and, like them, to increase in size without any amount of active inflammation.

The granulations which are sometimes found surrounding the os uteri—which may secrete mucus or pus abundantly, and which may bleed on being roughly handled—are, I have no doubt, the result of inflammation; but they resemble the *granular state of the conjunctiva*, rather than the granulations of a true ulcer, the granular os uteri offering no edges or signs of solution of continuity, by which we might satisfactorily declare it to be an ulcer. The *granular os uteri* would be a more correct designation in such cases, than “ulceration” of the os uteri. Some of the so-called ulcerations appear to be nothing more than patches of

thickened epithelium, or portions of the os and cervix, from which the epithelium has been removed by acrid or irritating secretions. We can imitate this condition of the parts by the slight application of the nitrate of silver—sufficient to affect the epithelial covering, but not sufficient to injure the mucous membrane beneath.

It appears to me that we can neither receive the existence of excoriation or abrasion; of granulation or fungous growths; the secretion of pus or muco-purulent matter; as affording undeniable evidence of the existence of “ulceration” of the os and cervix uteri. We must try ulceration in this part of the body by the same tests which we apply to ulcers in other parts of the economy. We must look for a solution of continuity, with a secreting surface, separated from the healthy structures, having defined edges, everted or inverted,—for an ulcer, in fact, in the common pathological meaning of the term. We find ulcers having these characters in the air-passages, mouth, stomach, intestines, bladder, and other mucous surfaces. There is no mistaking the characters of an intestinal ulcer after dysentery, and there ought to be no mistake about an ulcer of the uterus. Indeed, in the corroding ulcer of the uterus we unfortunately see that this organ is but too capable of taking on all the qualities of ulceration, in a degree only equalled by its extraordinary vitality, the organ being scooped out, or eaten away, in a comparatively short space of time. Cases are also met with in which the os uteri has been destroyed by the sloughing ulceration, and loss of structure, sometimes following the application of the more powerful caustic agents. We are, however, called upon by the unlimited believers in uterine ulceration to admit that ulcerative disease may exist for years, in its common form, without any perforation, excoriation, serious loss of substance, or altered configuration. Whether we test the so-called ulceration of the uterus by ulceration occurring in other mucous surfaces, or in the uterus itself, under undoubtedly ulcerative disease, the distinctive characteristics are wanting in the great majority of cases; and they certainly are not found, unless I am most egregiously mistaken, in the enormous proportion of 222 cases of ulceration to 300 cases of promiscuous uterine disease.

In all that I have said, I do not wish it to be supposed that I question the frequency of irritation, chronic inflammation, and subacute inflammation, in connection with leucorrhœa. Recent writers would, however, treat leucorrhœa merely and solely as a symptom, not as an independent disorder. But I am well assured that it is often the disease itself, or at least all of it

that we can appreciate; and that the irritable or inflammatory condition is excited secondarily, and mainly, by the morbid leucorrhoeal secretion. Some change in the innervation or nutrition of the organ occurs, or it sympathises with a malady in some remote organ, and the secretions are consequently depraved. These depraved secretions irritate the surfaces with which they come in contact, and produce the visible signs of irritation or inflammatory action. We see these discharges sometimes inflame and excoriate even the external integument, but we should never dream of saying that the inflamed condition of the skin was the essential part of the disorder. The same observation applies to the uterus. Thus it is not pathological, nor useful, always to consider leucorrhoea as a mere symptom; and the old plan of astringent injections, though sometimes mischievous, cannot quite be dispensed with; for in some, even profuse leucorrhoeas, an astringent injection, by arresting the uterovaginal discharges, does more than any other plan to soothe the inflammatory conditions, or rather to suspend their causes.

Notwithstanding the use of the speculum,—notwithstanding the use of lamps and glasses, there is often considerable difficulty in ascertaining the precise condition of the cavity of the uterine cervix, engorged as it is, and deep in colour from irritation, or other disease, and from the interruption to the circulation in the uterine organs which is almost necessarily dependent on the introduction and expansion of the speculum within the vagina. But in the dead subject no such difficulties exist; and it might certainly be expected, since leucorrhoea is a malady so very common, that uterine ulceration would be frequently revealed by post-mortem examinations. The only place in which, so far as I am aware, post-mortem examinations have been conducted in considerable numbers, with special reference to the determination of the frequency or infrequency of ulceration of the os and cervix uteri, is at St. George's Hospital. For several years past, the condition of the uterus has been examined with great minuteness and accuracy in the dead subject at this hospital.

Mr. Pollock, one of the lecturers on anatomy at St. George's Hospital, informs me that for more than three years, during which he was curator to the hospital museum, he examined the uterus internally and externally in all the subjects in the dead-house. During this time upwards of 100 women died in the hospital annually. In each case the uterus was laid open, and carefully inspected. Mr. Pollock only detected actual and unmistakable ulceration in four cases. Of these, three were scrofulous

subjects, and scrofulous ulceration existed in other parts of the body; and in one of them the ulceration involved the vagina extensively as well as the os uteri.

Mr. Gray, who succeeded Mr. Pollock as curator, informs me that during his curatorship he examined the bodies of 180 women, who had died of all diseases in St. George's Hospital, with a distinct view to ascertain the proportion of cases in which ulceration of the uterus existed. These examinations were also conducted with great care and minuteness. Out of the 180 subjects, distinct ulceration of the os and cervix was found in only three instances. Slight abrasions, discolourations, and granulations, were frequently observed; and this accords with the observations of Mr. Pollock. One or two other curators to St. George's Hospital, besides Mr. Pollock and Mr. Gray, have arrived at the same results. It is only by pathological investigations of this kind that we can arrive at infallible results.

But, it may be asked, why bestow so much pains on proving that abrasion, excoriation, and ulceration, are not *ulceration*? Why dispute as to terms? Simply because a name rules treatment, and because the name of "ulceration" being first given, an heroic treatment, not without danger, is frequently resorted to where milder local applications or constitutional treatment would be equally efficacious. After Mr. Abernethy wrote his celebrated work on the Constitutional Treatment of Local Disease, his idea was pushed to its extreme, and local remedies were often most improperly neglected. Now, in all that relates to the uterine organs, the doctrines of Mr. Abernethy are in danger of being entirely refuted, and we are in some risk of utterly neglecting constitutional treatment, and of being entirely absorbed by local applications. This we cannot do without impeding the improvement of the treatment of this class of affections. When a patient is told she has an ulceration of the womb, she often thinks of an ulcer of the leg, or the cheek, &c., and is proportionably frightened, because of the importance of the organ which is the seat of the presumed disease. There is nothing women will not submit to to be freed from such a dire malady. At the present time a veritable uterine panic affects the upper and middle classes of society, and every woman with the slightest ache, or discharge, is not satisfied until the peccant organ has been ocularly inspected. I do not believe that this state of things, or its inevitable results, will conduce to the dignity and respectability of our profession. I do not hesitate to affirm, so far as I have eyes to observe and a judgment to weigh facts, that

much exaggeration prevails respecting the frequency of this same ulceration of the os and cervix uteri,—an exaggeration which should be calmed, so that the legitimate methods of examination may lead, not to a suspicion of our profession, but to real improvement in the diagnosis and treatment of uterine disease as it actually exists. We cannot safely repudiate either the local or the constitutional treatment of uterine disease. I have seen cases in which the local ailments have been as far as possible cured; nevertheless, the constitutional symptoms remained unrelieved. I have seen others, in which judicious constitutional treatment has cured the local malady without any topical treatment whatever. But in the combat against disease, we require both constitutional and local weapons; and any views which disparage either the one or the other must cripple the resources of our art.

ACADEMY OF MEDICINE, PARIS.

April 9, 1850.

Treatment of Aneurism by Acupuncture.

M. GIMELLE read a report on a case of aneurism of the subclavian artery treated successfully by galvano-puncture. The details had been communicated to the Academy by M. Abeille in the month of July last. The reporters stated that from the facts at present recorded, galvano-puncture cannot be considered as equally efficacious with treatment by ligature, which should be preferred in every case; and even in aneurism seated in vessels which cannot be tied, it would be imprudent to resort to it, as it has been followed by serious consequences.

Nevertheless, the reporters observed, M. Abeille's case is interesting, because it presents an example of aneurism of the largest vessel in which success has hitherto attended this therapeutic agent. The observations also which accompany the case, the report stated, are highly creditable to the author's judgment.

MM. VELPEAU, ROBERT, MOREAU, and others, took part in the discussion of the report, which ended in a modification of the conclusions, to the effect that, instead of the words "ligature should be preferred in every case," the report should simply express an opinion that galvano-puncture cannot yet be regarded as efficacious as the ligature.

Extensive Hypertrophy of the Integuments of the Nose.

M. HUTIN communicated the case of a man, 72 years of age, who had suffered

from hypertrophy of the integuments of the nose. This organ presented a lobulated aspect, and constituted a tumor measuring seven centimetres (= 2.755 Eng. inches) from before backwards, and nine centimetres (= 3.534 Eng. inches) transversely. In this case a connection was traced between its origin and the suppression of a cutaneous eruption from the face, and also between the diminution, under topical applications, of the tumor itself, and the fatal symptoms which followed thereon.

Transposition and Malformation of Viscera.

Dr. LUCIEN BOYER presented the heart and lungs of an infant of two months old, in whom the thoracic and abdominal viscera were transposed. The child had presented the phenomena of cyanosis. The auricles of the heart communicated with each other, and were reversed in their relative position. The ventricles communicated without transposition. The auricles communicated with the ventricles by a single opening. The relations of the large vessels were also abnormal. It was found that pneumonic hepatization, and pleuritic effusion, existed in the same subject.

SURGICAL SOCIETY OF PARIS.

April 10, 1850.

M. MICHON detailed the steps of the operation which he had performed for the removal of an exostosis of the bones of the face, and which case he had brought before the Society on the 29th December and 12th of January.

On the Cancerous and Cancroid Affections of the Skin.

M. LEBERT read an essay on this subject, which comprised the results of the observation of twenty cases of true cancer, and of eighty-one cases of cancroid disease.

The first portion of the paper was occupied with the description of true cancer in the skin, where it presents the same characters as in other parts of the body, and involves remote organs in the same manner. The second portion treated of cancroid disease, which the author distinguishes as homœomorphous with the healthy structures, while true cancer is heteromorphous. The epidermic cells are a constant element of cancroid disease of the skin. This form of the disease has a tendency to spread by ulceration, but is radically curable. It may affect the adjoining lymphatic glands, but it does not infect the system like true cancer, from which also it differs, as already observed, in its anatomical characters. The

author dwelt on the peculiarities presented by the disease in the different cutaneous regions; and enforced the importance of a correct diagnosis between the two forms of disease with reference to both prognosis and treatment.

ACADEMY OF SCIENCES, PARIS.

April 8, 1850.

On the Diet of the Belgian Miners—Prophyllactic powers of Coffee.

M. GASPARI read a paper, in which he showed that the miners of Charleroi preserve their health and bodily vigour on a diet containing scarcely half the amount of nutriment of that of any other class of labourers in Europe. This diet consists, daily, of about three pints of coffee, two pounds of bread, two ounces of butter, about a pound and a half of potatoes, and leguminous vegetables, and once a week,—on the Sabbath, or on holidays,—about three quarters of a pound of meat, and from two to three pints of beer. The possibility of maintaining health, and working under these circumstances on so low a diet, is attributed by M. Gasparin to the agency of the coffee in promoting the activity of the digestive functions, or perhaps in its retarding the nutrition of those organs which do not demand a large consumption of material for their repair. In support of this view, M. Gasparin quotes the results given by Boëkers, to the effect that the solid matter of the urine is considerably diminished under the use of coffee.

This explanation, M. Gasparin observes, is borne out by the habits of the Arabs, of Caravans, and of the French army in Algeria, by all of whom great fatigue has been endured, under the use of coffee alone as a beverage.

The mining population referred to, enjoy easy circumstances compared with many other classes of labourers, and poverty is unknown among them, except from accidents and other unforeseen causes which incapacitate for labour.

BIOLOGICAL SOCIETY OF PARIS.

Monthly Summary.—January 1850.

PRESIDENT, M. RAYER.

Sugar in the Excretion of a Case of Diabetes.

A CASE of diabetes was related by M. WURTZ, in which glucose was detected in the serum of the vesication of a blister plaster. This fluid, of a pale yellow

colour, and containing a large quantity of albumen, was boiled in strong alcohol. The coagulated albumen was separated by filtration, and the fluid evaporated to a sixth of its bulk. This was then mixed with tartrate of copper dissolved in potash. An abundant yellow precipitate, consisting probably of hydrated protoxide of copper, was formed by boiling. There was here, therefore, a reduction of the cupreous salt, due alone, in all probability, to the presence of a small quantity of glucose. In order, however, accurately to determine this fact, the glucose should have been separated in a crystallized form. The *sputa* of this patient were subjected to the same processes for the detection of glucose, but the author failed to discover its presence. This negative result, M. Wurtz observes, does not invalidate the observations of Dr. Francis, but shows that the presence of sugar in the *sputa* of diabetic patients is not a constant phenomenon.

Epulis—its structure.

M. CH. ROBIN presented a specimen of this form of growth, removed from an inferior maxilla, from the substance of which it arose, and a portion of which it was necessary also to remove with the tumor. The elements of this structure were nucleated cells, fibroplastic cells, fusiform fibres, areolar tissue, capillary vessels, and granular bodies.

Malformation of the Generative Organs.

M. CAZEAU narrated the peculiarities of defective development of the generative organs in a girl about twenty-one years of age, who had menstruated only twice, and with whom sexual intercourse was impossible. From the examinations that were made, the following were regarded as the probable conditions of the organs. The ovaries existed, one in each groin; the vagina was wanting in its superior fifth; the uterus absent. The existing portion of vagina was the source of the sanguineous discharge which had been regarded as menstrual.

A Double Monocephalic Chicken.

M. DAVAINE observes that this form of monstrosity, not uncommon in mammals and reptiles, appears to be but rarely met with in birds. The chicken now submitted, from M. Rayer's collection, had been hatched at the full period. Its thoracic and abdominal viscera had been removed: the author's description, therefore, applied only to the skeleton. The head was supported on a short thick neck, consisting of two vertebral columns, to which were attached two distinct trunks, united by the thorax and abdomen, but separate again in the iliac region. Eight members were attached to the trunks.

Fusion of Teeth.

M. DAVAILLE exhibited the inferior maxilla of a child of five years of age, which presented the appearance of having five incisors. This proceeded from the fusion of two teeth of equal size: a vertical groove traversing its entire length marked the point of union. One alveolus existed.

This example of fusion of teeth differed from others which were mentioned, in the fact that the union was here brought about by a supernumerary tooth.

Correspondence.

ON THE PRESENT STATE OF THE MEDICAL PROFESSION.

SIR,—During the discussion of the contemplated new charter to the College of Surgeons, you may not think it out of place for one of your readers to call the attention of his professional brethren to some facts connected with the history and existing state of the present medical corporations—their powers and privileges—which seem to be overlooked or forgotten.

The College of Physicians, existing under the highest law—Act of Parliament—has extensive powers of restraining the practice of physic. Many years have passed since they have exercised any of these powers; and it is generally understood that they now refuse in any case to interfere. It is doubtful whether the physicians can enforce payment of their fees by legal process: the question was once decided against them, about sixty years ago. The fellows of the College of Physicians have the right, specially granted by act of parliament, to practise surgery.*

The College of Surgeons exists under Royal Charters, granted by different sovereigns,—how far confirmed in Parliament is doubtful. The members possess some few privileges, of no very great value, which have been recognised by different acts of parliament. The College have never conducted a prosecution for practising without their license. It is considered doubtful whether they have the power to restrain practice;

* This is under the 32d Henry VIII. chap. ix. "And forasmuch as the science of physic doth comprehend, include, and contain the knowledge of surgery, as a special member and part of the same, therefore be it enacted, That any part of the said Company or Fellowship of Physicians, being able, chosen, and admitted by the said President and Fellowship of Physicians, may from time to time, as well within the city of London as elsewhere within the realm, practise and exercise the said science of physic in all and every its members and parts, any act, statute, or provision made to the contrary notwithstanding." Thus, a Fellow of the College of Physicians is legally a surgeon; but a Fellow or Member of the College of Surgeons is not legally a physician.—ED. GAZ.

and they have never sought to possess it. It is a question whether surgeons, like the physicians, are without the power of recovering their fees in a court of law—except for surgical operations, or for necessary drugs supplied in fit cases. I am not aware that it has ever been decided.

The Society of Apothecaries owes its position as one of the licensing bodies to an act of parliament passed in 1815. Before that period, the Society, although one of the trading companies of the City of London, under a Charter of King James the First, admitted members into their society after an examination; and they were in the habit of supplying their own members, and, I believe, medical men generally, with drugs, as wholesale traders. More recently, however, they have opened a retail shop at their Hall.

By the statute of 1815 the Society acquired large powers of prosecuting parties acting as apothecaries without a license from them; and these powers they have exercised freely down to the present time. The statute does not define what constitutes the peculiar practice of an "apothecary;" but from the decisions of the courts of law it seems that the peculiar business of an apothecary, and which none but a Licentiate of the Society may follow, is the sale, without keeping an open shop, of drugs for an inward disease not discernible by outward appearances. Chemists and druggists, with an open shop, are free to supply drugs, with advice, in any case; and surgeons of the College may supply drugs in most diseases attended by outward appearances, as well as in some others,—as in agues, and probably in all contagious diseases. Physicians are, perhaps, entitled to supply drugs to their own patients. The practice of midwifery is open to any one, without license or education. This comprehends all diseases incident to the puerperal state, and allows the supply of drugs in such cases; but it does not extend, it is presumed, to the treatment of the infant, unless, perhaps, as the illness of the child might affect the mother.

"Medical practitioners" have been for some years recognised in various acts of parliament; and the term means indifferently physicians, surgeons, and apothecaries.

Of late years,—and it would be interesting psychologically to trace the origin,— "general practitioners" have come into notice,* but without any legal recognition. The term was at first limited to those who, having a license from the Society of Apo-

* Mr. Guthrie, in his evidence before a Committee of the House of Commons, observed—"I do not profess to know what a General Practitioner is myself."

theorists, with or without, in addition, the diploma of the College of Surgeons, practised physic, surgery, midwifery, and pharmacy. They were the successors, in title at least, of the "surgeon-apothecaries," many of whom, however, did not practise midwifery. Gradually in London, and many of the leading country towns, a large and increasing number of the general practitioners have discontinued the practice of pharmacy, apparently without considering whether they do not thus render themselves liable to penalties for practising physic without a license from the College of Physicians: and it is not easy to understand the distinctive position of the general practitioner in a country where there remains no special practitioner but the dentist,—the last of a recognised class of specialists having expired with the "licentiates in midwifery" of the College of Physicians. No partial license has been granted by the College of Physicians for many years, and they have rescinded the rule which required a surgeon or apothecary to be released from the membership of his own society before being admitted to the license of their College.

As a point of political history it is remarkable that the statute of 1815, which exacted an apprenticeship from an apothecary, should have been passed by the legislature twelve months after the apprenticeship to all trades had been abolished; and it is not unlikely that a review of the statute, if the legislature should undertake it, would lead to a similar abolition. Practically, the law as it stands is inoperative, as far as the service of the apprentice is concerned; for the number of apprentices is not limited, and it is not required that the apprentice should serve in his master's house. The law is satisfied if five years after the execution of the indentures the master acknowledges the service. So far, indeed, is the required apprenticeship considered an obstacle in medical education, that at one of the collegiate institutions lately established indentures of apprenticeship are provided for all those students who require that addition.

For one other material alteration we must be prepared. It is generally believed that the legislature will not again grant to any of the Corporations the power now possessed by the College of Physicians and the Society of Apothecaries, of prosecuting parties practising without their license: and there is every reason to suppose that the House of Commons will not entertain any measure which has for its object to restrain medical practice to any class, however qualified.

D. R.

April 1850.

Medical Intelligence.

MEDICAL EVIDENCE FROM NON-MEDICAL WITNESSES.

AN inquest was recently held at Nottingham on the body of a child which was found dead. William Sumner, a labourer of the village, said that about four o'clock in the afternoon of Sunday last, he was walking in a close in the occupation of Mr. Parr, and saw what he at first believed to be a lump of manure. He turned it over, and then looked at it again, lifted it up, and discovered it was a bundle. He untied it, and then found it contained a dead child with its head off; and on a closer inspection he perceived one of its toes was missing. It was in a doubled-up posture, so much so that the bottom of its neck rested upon its thighs, and its legs upon its back. The child appeared to be a full-grown one. He did not notice how its head had been taken off. *He was of opinion the child had been lapped up when the blood was fresh, as the apron stuck so close to its shoulders that his son was obliged to hold it down with his feet whilst he pulled it off.* He was confident the deceased had been put into the bundle without its head, as it was tied up too fast to allow of its falling out. The bundle appeared to have been brought into the field in a load of manure, which had been scattered over it. He immediately gave information to the police, and the deceased was removed to a public-house. The body, when he first found it, was quite fresh, and not in the least decomposed.—Alice, wife of William Smith, landlord of the house, said, when the child was brought to her house it was quite fresh. The head appeared to have been cut off close to the shoulders.—Henry Lane, publican, Cropwell Bishop, said, that he and William Smith bought a cargo of manure of Mr. Mannors and Mr. Robinson, of Nottingham, both of which were laid upon the land in the fields. He was of opinion the deceased must have been brought in one of the loads of manure, but it was impossible for him to say which. The jury, after a short consultation, returned the following verdict:—"That the deceased was found dead, with its head and one of its toes off, but whether the child was born alive, or whether its head and toe had been removed during life, or afterwards, the jurors say, from the decomposed state of the body, no satisfactory evidence has appeared to prove."

. The jury were rather unreasonable to expect that they could have "satisfac-

tory" medical evidence from a farm-labourer; but probably it was found desirable to save the county rate the expenditure of a couple of guineas.

AWARD OF THE JACKSONIAN PRIZE.

THE President and Council of the College of Surgeons have just awarded to Mr. Peter Hinckes Bird, of Birmingham, one of the above prizes for the best "Essay on Erysipelas, its Nature and Treatment;" and the other to Mr. Henry Lee, Dover Street, Piccadilly, for his "Dissertation on the Causes, Consequences, and Treatment of Purulent Deposits." The former gentleman is a member of the College, his diploma bearing date May 19, 1848. The latter is a fellow by examination. The prize, which is of the value of twenty guineas, is accompanied by an honorary certificate.

MEDICAL APPOINTMENT—MIDDLESEX HOSPITAL.

DR. S. J. GOODFELLOW, formerly of the Fever Hospital, has been appointed Lecturer on Medical Jurisprudence at the Middlesex Hospital School of Medicine, in the vacancy occasioned by the resignation of Dr. G. O. Latham.

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 19th inst.:—P. Culhane—A. W. Moore—J. Pottes—H. W. Voss—W. Prater—J. E. Cathcart—J. E. Forster—J. Clark—E. A. Brown—J. Coggins—W. Hewett—J. Jeken—J. Watkins—F. J. Dyer.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, the 18th instant:—James Hay Morgan, Newcastle Emlyn, Carmarthen—Charles Terry, Bath—Alfred Thomas Brett, West Moulsey, Surrey—John Clark, Derby—William Scott, Sherborn, Yorkshire—Henry Madge, Clonelly, Devon—John Hollingsworth, Cambridge—John Davidson, London.

OBITUARY.

AT Pisa, on the 10th inst., after a long and painful illness, Henry Harrington, Esq. M.D., son of the late John Herbert Harrington, Esq., member of Council, Bengal.

On the 21st inst., at Ratcliff, Allan Cleland, Esq., surgeon.

Selections from Journals.

EXPERIMENTAL RESEARCHES ON THE FUNCTIONS OF THE LARYNX. BY M. L. A. SEJOND.

M. SEJOND, from consideration of the vocal mechanism, and observations on animals, has arrived at the conclusion that the two registers of sound noticed in the higher animals, owe their production to the existence of two instruments. He was induced *à priori* to regard the inferior folds of the glottis as the instrument of the register of sounds known in man as the thoracic voice (*voix de poitrine*), and the superior fold as the organ of the falsetto voice (*voix de fausset*). Experimental researches establish the correctness of this assertion.

1. All animals which possess two pairs of cords can form two vocal registers. This is strikingly exhibited in the cat and the dog. The bark is a true thoracic voice (*voix de poitrine*), while the acute sounds emitted by the dog when suffering pain belong to the falsetto (*au registre de fausset*). The cat produces the thoracic voice when engaged in its amorous combats, whereas in its mewing it utters the falsetto. The horse and the ass produce in their bray and neighing a similar variety, by the alternation of inspiration and expiration.

By section of the superior or inferior folds of the glottis, the falsetto or the thoracic voice was destroyed, according as the former or latter were divided. The epiglottis was observed in these experiments to be depressed during the formation of acute sounds, and erected during the omission of grave sounds; and, by influencing its condition, the character of the sounds could be changed. By controlling the movements of the velum palati the sounds could also be greatly modified.—*Comptes Rendus*.

*** We are quite at a loss to discover that the preceding researches have thrown any additional light on the physiology of voice, at all commensurate with the cruelty of the experiments which were instituted by the author. X

DEATH FROM LAUDANUM IN THREE-QUARTERS OF AN HOUR.

DR. COALE had a memorandum of a case where death followed the ingestion of laudanum after an interval that could not have been longer than that above stated. Dr. Coale desired to mention this case in connection with one reported some time since by Dr. Lyman, where the time was equally short.—*American Journal of Med. Sciences*, Jan. 1850.

BOOKS & PERIODICALS RECEIVED FOR REVIEW,

DURING THE LAST TWO WEEKS.

On the Causes, Nature, and Treatment of Palsy and Apoplexy. By James Copland, M.D. F.R.S. &c.

A Microscopic Examination of the Waters supplied to the Inhabitants of London, &c. By A. H. Hassall, M.B. F.L.S.

Anormal Nutrition of the Articular Cartilages. By P. Redfern, M.D.

On Diseases of Menstruation and Ovarian Inflammation, &c. By G. J. Tilt, M.D.

On the Principles of Health and Disease. By David Nelson, M.D. Edin. &c.

Report of the County Lunatic Asylum near Gloucester. 1849.

Second Report of the Somerset County Lunatic Asylum.

State of the Lincoln Lunatic Asylum.

Bibliotheca Medico-Chirurgica. July to December 1849.

Comptes Rendus. Nos. 13 and 14. 1 and 8 Avril.

Annales d'Hygiène Publique et de Médecine Légale. No. 86. Avril 1850.

Casper's Wochenschrift für die gesammte Heilkunde. Nos. 10, 11, 12, and 13. 9 to 31 March.

Short Essay on the invariably Successful Treatment of Cholera with Water. By C. C. Schieferdecker, M.D.

The Mineral Waters of Schwalbach. By Adolphus Genth, M.D. &c.

[We beg to assure Dr. Genth that his work shall receive our careful attention.]

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, April 20.

BIRTHS.		DEATHS.	
Males....	755	Males....	434
Females..	716	Females..	432
1471		866	

CAUSES OF DEATH.

ALL CAUSES	866
SPECIFIED CAUSES	860
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	171
Sporadic Diseases, viz. -	
1. Dropsy, Cancer, &c.	55
2. Brain, Spinal Marrow, Nerves, and Senses	113
3. Heart and Bloodvessels	34
4. Lungs and organs of Respiration	141
5. Stomach, Liver, &c.	44
6. Diseases of the Kidneys, &c.	12
7. Childbirth, Diseases of Uterus, &c.	9
8. Rheumatism, Diseases of Bones, Joints, &c.	7
9. Skin	1
10. Old Age	42
11. Sudden Deaths	15
12. Violence, Privation, Cold, &c....	17

The following is a selection of the numbers of Deaths from the most important special causes :

Small-pox	11	Convulsions	35
Measles	17	Bronchitis	56
Scarlatina	19	Pneumonia	64
Hoooping-cough	36	Phthisis	122
Diarrhoea	19	Lungs	5
Cholera	0	Teething	9
Typhus	35	Stomach	4
Dropsy	17	Liver	4
Hydrocephalus	23	Childbirth	3
Apoplexy	28	Uterus	4
Paralysis	16		

REMARKS.—The total number of deaths was 70 below the average mortality of the sixteenth week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.50

" " " Thermometer " 48.9

Self-registering do. " Max. 0.0 Min. 32.

" From 12 observations daily. " Sun.

RAIN, in inches, 1.1.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 1° below the mean of the month.

NOTICES TO CORRESPONDENTS.

Mr. Swan's additional communications have come to hand, and will have our early attention.

We have received the Reports of the Lincoln and Somerset County Lunatic Asylums. These, with others previously forwarded, will be shortly noticed in one article.

Mr. Bate, Swansea.—A private letter will be sent. Mr. J. W. D. Brown, London Hospital.—The contribution will appear as soon as possible.

Quæstor.—Dr. Laycock, of York, and Dr. Wright, of Birmingham, published in one of the journals a series of papers on the subject alluded to. We do not know whether they have been reprinted in a separate form. A letter to either of those gentlemen will procure the information desired.

We propose resuming Dr. Routh's Reports next week. We regret that various circumstances have interfered with their regular publication.

We shall have great pleasure in inserting Dr. J. E. Pollock's case at an early opportunity.

Dr. Cotton's cases shall appear very shortly.

If Dr. Seaton will let us have the Report in good time, it shall be inserted.

RECEIVED.—Dr. Jamieson, No. 1.

Notice.—We have to request that all ADVERTISEMENTS may be addressed directly to MESSRS. LONGMAN AND CO. Paternoster Row, and marked on the outside "ADVERTISEMENT." Great delay in the insertion has arisen from their having been addressed to the EDITOR of the Journal.

Lectures.

THE

LUMLEIAN LECTURES FOR 1850.

Delivered at the Royal College of Physicians.

By R. B. TODD, M.D. F.R.S.

ON THE PATHOLOGY AND TREATMENT OF
DELIRIUM AND COMA.

LECTURE I.—(Concluded.)

Hysterical delirium.—Not far removed from the epileptic delirium is that which occurs in aggravated states of hysteria, and which is well known to practical men as *hysterical delirium*, and which frequently assumes a chronic form, when it may be properly called *hysterical mania*.

The following sketch will, I think, embrace the leading particulars of the clinical history of this interesting malady:—

A girl of hysterical constitution has been somewhat out of health, without, it may be, any very prominent symptom, excepting, perhaps, headache; her spirits are more or less depressed, and she shows some tendency to hysterical paroxysms,—she may have one or two; presently she does not so readily as usual recover from one of these; she becomes odd in her manner—obstinate—talks at random—refuses food—and she is now evidently delirious, which may be accompanied with more or less of stupor and indifference to all around, or may be violent and furious: she will try to get out of bed—be mischievous—attempt to injure herself or her attendants—wakeful; and in such cases it is that the patient will act and talk in a manner apparently the most repugnant to the character and reputation she had previously enjoyed, or the real defects in her character: her real inclinations, which principle, or prudence, or cunning, had taught to overcome or conceal, will become developed, and she will be obscene or amorous, or exhibit violent hatred towards others, or other feelings to them: it may be that she will now speak the truth, which before she did not venture to do:—*in delirio veritas, as in vine veritas*.

In many instances the paroxysm of hysteria is accompanied by delirium, of greater or less intensity, which comes on and goes off with the paroxysm, or remains for some time after it, or may precede it; and this form of hysterical delirium obviously resembles the epileptic, in the relation which it bears to the paroxysm, just as the hysterical paroxysm often resembles

the epileptic so closely that it is impossible to distinguish the one from the other.

This form of delirium is not often fatal. If not treated on a depressing or lowering plan, its tendency is to recover, or to pass into a chronic state, from which the patient may emerge in safety, or may become hopelessly lunatic.

Now and then we have opportunities of making post-mortem inspections of the brain, which on such occasions afford no indications of any special lesion during life, beyond such as show that the general nutrition of the brain had been disturbed. In the case of a young lady who died after five weeks' delirium of this kind, I made a most careful examination of the brain: it looked somewhat shrunk, the convolutions small, and the subarachnoid effusion increased in quantity: the grey matter of the convolutions was slightly softened, but not more so than might be expected from its lying in contact with fluid for twenty-eight hours after death. Some of the smaller arteries penetrating the surface of the brain at the fissure of Sylvius seemed somewhat dilated; and some extremely small extravasations, less in size than a pin's head, had taken place into the mammillary bodies; not more than five or six in each.

This girl was a person of strong sexual passions, and of ill-regulated temper: she was at an early period of life left an orphan in the hands of indiscreet relatives, mistress of a small fortune, with all the ideas of the heiress of a considerable property. She was opposed successfully by her relatives in a love affair, which led to many family discussions and scenes, on which occasions she exhibited great violence. At length, after having been hysterical for some time, she exhibited undoubted signs of delirium, in which she was at times very violent; and she refused food for so long a time that it was found necessary, in consequence of her state of debility, to feed her with an œsophagus-tube. These points of the history of this case are of importance, as serving to explain the dilated state of the small cerebral arteries, which was produced, no doubt, by the frequent excitement of temper to which the patient was liable before her illness, and to the violence which she occasionally exhibited after the delirium had commenced, and the efforts she made when it was found necessary to make use of restraint.

In another fatal case, the subject of which was a young lady of 22 years of age, I found the brain and its membranes in a healthy state. The pia mater was well injected, but not more than might naturally be expected in a young person of active

mind and with a well-developed brain, and the arachnoid was perfectly natural. The brain itself was as perfect a specimen of that organ, in a well-formed Caucasian female of considerable personal beauty, as I ever beheld.

The history of this case was as follows. She was of a highly hysterical diathesis, and irregular as to the catamenial function; the menses sometimes appearing too soon, at others retarded; sometimes profuse, and again scanty. She was accustomed to live in the country, but she had recently come to town to help her sister (who was in bad health) in looking after her domestic concerns. Her sister having been obliged to leave town, she was left in charge of her establishment, the responsibility of which she seemed to feel acutely; at the same time she exposed herself to a great deal of fatigue in escorting a country friend about town "to see the lions," and going to musical parties. On the 3d of April she complained much of throbbing headache, and she had passed two sleepless nights; she suffered from loss of appetite and nausea. There was no fever. The pulse 76. On the 4th, after another restless night, the pain in the head remained, and she vomited some of her food. On the 5th there was great irritability of stomach; everything, food and medicine, was rejected. She complained of severe pain at the vertex. Pulse 64. No heat of skin. On the 6th the vomiting continued, so that she retained no food. She retched a great deal, and brought up bile and mucus. Headache intense. Sleeplessness. Pulse 60. Tongue coated. This day a dozen leeches were applied to the temples, which bled freely, and the pain in the head was much relieved, and the vomiting ceased for several hours: it returned, however, in the night, and she rejected both medicine and food.

7th.—She became talkative and noisy. There was still sickness. Pulse not above 70, and of a sluggish character. Light painful to the eye; pupils sluggish.

8th.—Delirious: in sleep talkative and dreaming. It is necessary to rouse her by addressing her loudly in order to gain her attention. There is a slight appearance of squint with the right eye, but this was probably nothing more than an increase in a natural cast in the eye, which we know is often produced in persons so formed under emotional excitement.

From this time the patient became extremely depressed. The delirium continued, alternating with a semicomatose state; and on the 12th she became almost completely comatose, retaining sufficient consciousness to enable her to take nourishment, which was rendered the more neces-

sary in consequence of the exhaustion caused by a troublesome diarrhoea, which was probably caused by some calomel which had been given her. She died on the 14th.

I was much embarrassed in the treatment of this case by the resemblance of the symptoms to those of cerebral inflammation, which led me for some time to adopt an antiphlogistic plan, with which the powers of the patient were not very well able to cope. The vomiting, the pain in the head, the tendency to a comatose state alternating with delirium, are symptoms generally recognised as indicative of inflammation within the cranium; but against these might be placed the absence of fever, and of quickness of pulse; the hysterical constitution, and the previous fatigue and exhaustion; all of which, taken in conjunction with the results of the post-mortem inspection, convince me that the case was one of hysterical delirium, and that it would have been better had the patient been spared all antiphlogistic treatment.

Men are liable to a form of delirium which bears a close analogy with the hysterical delirium of women, and which there can be no doubt is intrinsically of the same nature. I have seen it in over-worked professional men, in students, and in hard-working artisans, even when of temperate habits.

The following instances will serve to illustrate this form of delirium. A gentleman, of 35 years of age, a solicitor, a man of gouty habit, and highly sanguine temperament, having been unusually engaged in business of an anxious kind, was attacked with symptoms of catarrh, extending to the bronchial tubes, but neither violent nor extensive. This, however, had a most depressing effect upon him; and on the third or fourth day he became violently delirious. He knew every one around him, but could not be persuaded that his affairs were not in a ruinous condition; at the same time, however, he would devise very reasonable plans for extricating himself from his supposed difficulties. He was very wakeful, and was with difficulty restrained from getting out of bed, to take, as he said, the necessary steps for arranging his affairs. This state of delirium continued more or less for a week, and passed off with profuse sweats and long sleeps, leaving the patient in a state of great exhaustion, notwithstanding diligent supplies of support and stimulus, which were constantly administered to him.

In another instance, a young man of 25, who was pursuing the profession of a teacher of music, had been working very industriously at the studies necessary for his

profession, and at the same time his mind was much engaged with religious subjects, and greatly excited by the ardent appeals of one of those preachers who address themselves chiefly to the feelings of their hearers, and aim at exciting their imagination rather than at convincing their judgment. His illness, as in the previous case, began with a catarrh of a slight kind, but accompanied with considerable prostration of strength. Delirium became developed in a few days, and it was with the greatest difficulty the patient could be controlled. His thoughts were wholly occupied with religious subjects, evidently of the same nature as those of the discourses of which he had lately been a hearer. He imagined himself a prophet sent by God for the regeneration of mankind, and that it was necessary, prior to his entering upon his prophetic office, he should die, and that after three days he should return to life, and then proceed upon his tour of declaring his message to different people. He used to feign being dead when I was present, but was not able to keep up the appearances of death throughout the day. Having for a day or two humoured his fancy by appearing to be greatly shocked at his death, and to believe in its reality, the next day I gave him some practical proofs of his vitality, and threatened to make a post-mortem examination of him, and to open his head on the following day, unless he revived. This had the desired effect. The next day I found him restored to life, much more tractable, willing to take food, and in about a fortnight he had completely recovered, but with considerable weakness.

Puerperal delirium.—I shall next notice the delirium which accompanies the puerperal state, which resembles very closely hysterical delirium, and is no doubt essentially of the same nature. It is well known under the name of puerperal mania, or puerperal insanity; but, although this title may justly be given to some of the cases which are very chronic, it seems to me that it is quite as erroneous to say of patients who had suffered from this form of delirium, that they had once been insane, as to class among lunatics patients who had once suffered from the delirium of typhus or of erysipelas.

The clinical history of this form of delirium is told in a few words.

It occurs generally soon after parturition, and during suckling; rarely during the latter months of pregnancy.

It is most frequently brought on by some mental emotion, or by some great exhaustion,—as from a lengthened labour with a dead child, or profuse hæmorrhage, or by the debility induced by suckling in a feeble constitution,

It is apt to occur in women of hysterical constitution; but it may be developed in persons with whom the marks of that state of constitution are not prominent.

As in other forms of delirium, the mental disorder appears to be very various, from slight raving to the highest degree of fury, or from slight melancholy to a state of depression and dulness almost amounting to coma.

The greatest number of cases of puerperal delirium recover. Dr. William Hunter pointed out the very important practical fact that it is the amount of fever, or rather perhaps the rate of pulse, which may be taken as the best guide in forming the prognosis. Although I have not seen this form of delirium on an extensive scale, I have seen enough of it to lead me to believe that Dr. Gooch gives a perfectly accurate account of it, when he says that there are two forms, the one attended by fever, or at least by a rapid pulse; the other accompanied by a very moderate disturbance of the circulation; and that the latter cases, which are by far the most numerous, recover; that the former generally die. These are the cases which are in the greatest danger, and which require the most constant vigilance on the part of the medical and other attendants on the patient.

There are, however, as Dr. Gooch remarks, some other circumstances to be taken into the account of the prognosis. Thus the early appearance of the delirium after delivery, especially if it be of the maniacal kind, is more dangerous to life than its late appearance, and its being of the melancholic kind. "Nights passed in sleep, a pulse slower and firmer, even though the mind continues disordered, promise safety to life. On the contrary, incessant sleeplessness, a quick, weak, fluttering pulse, and all the symptoms of increasing exhaustion, portend a fatal termination, even though the condition of mind may be apparently improved." Dr. Gooch adds that, in the cases which he has seen to terminate fatally, the patient has died with symptoms of exhaustion, not with those of oppressed brain, excepting only one case. One of my own cases died apparently from the exhaustion caused by removing the patient from her bed, which was done with great care, in order to have her cleaned and the bed made.

In examining the heads of patients who die of this disease, we fail to discover any distinct evidence of special lesion, either of the brain or its membranes, excepting in cases where some previous disease of the brain had existed. In those fatal cases recorded by Dr. Gooch, no morbid appearance was found other than that which follows loss of blood. Esquirol makes this

statement—The examinations of the bodies of those who have died, whether recently confined or nursing, after having been a longer or shorter time disordered in mind, discovers nothing which throws light upon the material cause, nor upon the seat of this derangement (tom. i. p. 244.)

Anæmic delirium.—The next form of delirium which I shall notice is that which arises from deficiency of blood, or what I may call *anæmic delirium*. It may arise where the blood is imperfectly formed, or where the system has been subjected to great losses of blood. Thus in some cases of extreme chlorosis we meet with delirium which is apt to assume the maniacal character; and, on the other hand, it may arise in cases of profuse menstruation or menorrhagia. Some of the cases of hysterical delirium are nearly allied to this; and if the hysterical diathesis exists in a patient subject to excessive losses of blood, it will predispose to this form of delirium.

Again, many of the puerperal cases of delirium are clearly attributable to the excessive losses of blood from hæmorrhage, or from unduly active depletion by leeches or by general bleeding. Dr. Marshall Hall lays it down, and, I think, with great justice, that "loss of blood is by far the most frequent and influential source of delirium or mania occurring in the puerperal state."

A good example of this form of delirium is given by Dr. Abercrombie. "Many years ago," he says, "I saw a man who was seized with bleeding from the nose to such an extent that at last it became necessary to arrest it by pieces of sponge carried up from the fauces. Next day he was without complaint, except great weakness; on the third day he became highly maniacal; pulse generally from 90 to 100, and soft."

This form of delirium is not unfrequently preceded or followed by attacks of violent convulsions. I related a remarkable case of this kind in the Lumleian lectures of last year. The patient was a delicate woman, who miscarried, with some hæmorrhage; after this she became thin and pale. While in this state she experienced some giddiness of the head, as well as slight delirium, for which she was bled, and had leeches applied: owing to the giving way of the bandage on her arm, and the application of additional leeches to relieve the supposed congestion of the head, she lost still more blood: her convulsions recurred, and she became delirious and maniacal.

Cases of this kind will be more rare when a more general assent is given by members of the profession to the doctrine that congestion of the brain will not account for giddiness and delirium, and other signs of disturbed cerebral function.

Traumatic delirium.—A remarkable form of delirium has long been known to surgeons as apt to follow severe injuries, whether from accident or from surgical operation. Dupuytren has left a highly graphic description of this form of delirium, and gives it the name of *nervous* or *traumatic delirium*.

A man meets with a severe accident, a compound fracture, or he undergoes a great surgical operation: for a day or two matters seem to go on well, when he suddenly becomes confused in his ideas, incoherent, and at length he becomes wild and talkative, and wakeful; refuses food, tries to get out of bed, perhaps tears off his bandages or splint; and, what is very remarkable, seems perfectly indifferent to pain, and moves the broken limb or injured part as if it were in a natural condition. Sleeplessness is a prominent feature of this delirium; and when that is overcome, as it frequently may be by the careful use of opium, the patient gets well; but sometimes the delirium is so violent as to exhaust the patient in a few days. Nor does the delirium always bear a direct proportion to the severity of the injury. Dupuytren relates the case of a young man in whom it came on in consequence of a slight injury to one of his toes, and killed him in two days.

In these cases, as in the other examples of delirium which I have mentioned, post-mortem inspection discloses no lesion of the brain or its membranes. "Neither in the cerebro-spinal apparatus, nor even in the other organs," says Dupuytren, "can we perceive any material lesion which can explain the disturbance which has taken place during life, which can afford a satisfactory explanation of the cause of death."

Delirium occurs in connection with typhus fever, with erysipelas inflammations of internal organs, as the heart and lungs, and with the exanthemata.

Delirium of typhus.—The delirium of typhus is apt to come on in the second week: it varies in its characters from a low muttering semicomatose condition to a highly-excited maniacal state. Coming on in the course of a disease, which so terribly prostrates the powers of the patients, it must be regarded as a very formidable symptom, especially when it assumes the maniacal form: for, under the influence of this state of excitement the patient is prompted to get out of bed, or otherwise to make great exertions, and thus exhaustion is produced, and not unfrequently a patient will die from sudden syncope caused by some effort he has made.

I have had many opportunities of examining the bodies of patients after the delirium of typhus; and in no instance have I been

able to detect any lesion bearing upon the delirium. The brain in typhus is essentially healthy; but the condition of its blood-vessels corresponds with that of the blood-vessels every where else—namely, a state of laxity of their coats, while they contain, or appear to contain, more than their normal quantity of blood, and that of a dark venous kind; in some instances there is more or less subarachnoid fluid; in others the fluid is absent: never is there any sign of an active morbid process, like inflammation, either in the brain or its membranes, tending to generate new matter, as lymph and pus, and to destroy existing tissue.

This form of delirium is of much shorter duration than most of those which I have already described; nor has it any tendency to degenerate into a chronic state, as is the case with the hysterical and with the puerperal delirium. Like the traumatic delirium, it seldom lasts many days, either killing the patient by exhaustion, with more or less of coma, or ending in recovery.

Erysipelatous delirium.—The delirium of erysipelas resembles very closely that of typhus, excepting in this point, that it is perhaps more frequently of the more active and violent, than of the low and muttering kind. It commonly comes on with more or less of suddenness: you leave your patient going on well; on your next visit, a few hours afterwards, you find him talkative, rambling, attempting to get out of bed, noisy, and soon he becomes so violent as to require the constant watchfulness of one or two attendants, or the restraint of the strait-waistcoat, to prevent him from injuring himself or others.

It occurs in both idiopathic and traumatic erysipelas; and is not confined to that of the head or neck, but will take place in cases in which the erysipelas is confined to the trunk, and never reaches the head. It seems more apt to occur in debilitated subjects—in patients after operations which have caused much loss of blood—and in the low and decidedly typhoid forms of erysipelas.

Patients die in it, just as in the delirium of typhus: they die suddenly in an effort, or they become much exhausted, or they fall into deep coma; but more frequently they recover, especially if care be taken to prevent them from making violent exertions, and to give them a proper amount of support. The duration of this delirium is not in general above a few days, and it very rarely degenerates into a chronic state.

The inspection of the brains in these cases shows no sign of active disease, nor any evidence, as might not unreasonably be

supposed, of a state of brain similar to that of the external parts. The erysipelas does not fly from the exterior to the interior: there is no metastasis, although I should not be prepared to say that the brain is not affected by the poison of erysipelas. It is certain, however, from numerous post-mortem examinations, that the brain and its membranes of patients dying under this form of delirium, exhibit no morbid alteration of any kind sufficient to account for the phenomena. What I have most frequently seen in this, as in other forms of delirium, has been a state of pallor of the grey matter, and an increased number of bloody points in the white matter of the hemispheres.

Rheumatic delirium.—That form of delirium which accompanies inflammation of the lung, or of the heart, occurs so commonly, if not uniformly, in the rheumatic state, that I shall describe it in connection with that delirium which arises in the course of rheumatic fever, under the name of *rheumatic delirium*.

The following description of this form of delirium accords with what I have myself seen, and what I find recorded by others:—

A patient is seized with all the ordinary symptoms of rheumatic fever, and he goes on without any untoward symptoms,—it may be for only three or four days, it may be for a week, or even later,—when the nurse having perhaps reported that he passed a restless night or two, and wandered more or less, we find him delirious, raving, talking wildly, and, as in the traumatic delirium, entirely disregarding his hitherto exquisitely painful, and still swollen joints. The tendency in these cases is to the acute maniacal state, and to wakefulness; so that frequently the patient requires restraint, and always the closest watchfulness.

As in the other acute forms of delirium, patients often die suddenly in this, evidently from exhaustion. Sometimes they quickly fall into a state of profound coma, which lasts from one to twenty-four hours, and terminates in the death of the patient. I suspect that moving patients from one place to another in rheumatic fever is apt to bring on this mode of termination; for I have had several cases in which a patient was brought into the hospital late in the afternoon, having been three or four days ill of rheumatic fever, and in the course of the night he became delirious, and then comatose, and died.

This delirium is sometimes ushered in by other symptoms, which denote a more extensive disturbance of the nervous system than delirium would do. Thus, a patient will be seized with chorea-like jactita-

tions affecting the upper extremities, and the muscles of the face, and sometimes a condition almost tetanic is present, and more or less of rigidity and oposthotonos are produced.

Coincident with the first appearance of these symptoms, that is, either of the delirium or the jactitations, we frequently find, but by no means always, the first signs of inflammation of the pericardium, or of the endocardium, or of one or both lungs, or of the pleura; and as the delirious state diverts the mind of the patient from the perception of all pain, it often happens that no other indications of the internal inflammation can be obtained than those of the physical signs, the rubbing sound, or the bellows-murmur, or the altered breathing sounds: and hence it has not unfrequently happened that in the midst of the great disturbances of the intellect, the inflammation within the thorax has been unsuspected, and undetected.

Judging from my own observation of this delirium, I would lay it down that it occurs chiefly in those patients who exhibit considerable pallor, whether that pallor be simply the result of the rheumatic state, or of that combined with the effects of a greater or less loss of blood. I have seen it brought on in a patient, who had previously exhibited no untoward symptom, by the application of some leeches to a rheumatic joint, without any cardiac inflammation: and I have also seen it come on after very large bleeding, both general and topical, where there was no very extensive development of the rheumatic state, and where, also, the signs of cardiac inflammation were at most indicative of but a slight endocardial inflammation. But, on the other hand, nothing is more certain than that it has come on where there has been no bleeding practised at all: and that it has got well when bleeding, topical or general, has been practised *after* the appearance of the delirium.

The inexperienced practitioner is apt to mistake these cases for inflammation of the brain and its membranes, and to treat them accordingly. The first case of the kind which occurred to me, many years ago, convinced me of the error of this view. A fine young woman, of 25 years of age, was under treatment for rheumatic fever: pericarditis was present, and detected by leeches, blisters, and mercury. On the second day after the discovery of the pericardial inflammation she became delirious and furious: her head was shaved, leeches applied to the temples, and a thorough antiphlogistic plan pursued, but the patient sank into coma and died. And the post-mortem examination showed a brain healthy, but pale and exsanguineous,

with membranes devoid of the slightest indication of morbid deposit.

My friend, Mr. Henry Smith, of Caroline Street, Bedford Square, has communicated to me the following case, which occurred to him in May, 1848, and which I may mention to show that antiphlogistic treatment applied to both the heart and the head will not avert death. A Navy officer, aged 43, who had lived hard, was attacked with rheumatic fever, complicated with pericarditis and pleuro-pneumonia, which appeared on the fifth or sixth day, and was duly detected. He was treated by leeches, and calomel and opium. In two or three days more, violent delirium became developed, for which Mr. Smith at first prescribed opium; but a physician who was called in, believing that the delirium depended on inflammation of the cerebral meninges, prescribed leeches to the head, which were applied: the delirium, however, increased, and the patient died. The heart was found covered by a thick layer of lymph, and the brain and its membranes were perfectly healthy,—the former being "white, and comparatively bloodless."

And, moreover, these cases will die even when a very slight affection of the heart exists. I take the following from the records of the Pathological Society of London:—

The patient, a girl, 21 years of age, died on the seventeenth day of rheumatic fever, there having been no untoward symptom up to the day preceding her death. On that day she began to be restless, and to exhibit indications of approaching delirium; during the night the delirium became fully developed, and early the next morning she became quieter, as if from exhaustion, and she gradually became comatose, and died at 6 A.M. She was examined nearly thirty hours after death, and Dr. Bence Jones, whose patient she was, reports "that the brain and its membranes were rather dryer than natural, but otherwise presented nothing remarkable. No excessive congestion was found, and no effusion of blood or water." And as regards the heart—"About two ounces of serum were found in the pericardium; the *very slightest roughness* of the surface of one auricle was observed, but otherwise there was no evidence of inflammation of the pericardium; the valves of the heart were perfectly healthy."

And such is the history of all these cases of rheumatic delirium. It is, as with all the other forms of delirium which I have enumerated, that no morbid appearance whatever is to be found in those organs, the brain and spinal cord, whose functions are so disturbed as to mask and conceal the symptoms of more serious disease af-

fecting other organs. Were I to rely on my own experience of these cases, and on such cases as I have met with recorded in various works, or as have occurred in the practice of friends, I would say that no organic disease—i. e. no inflammation, no effusion of pus or lymph—is ever met with where this rheumatic delirium occurs. But I hesitate to make this statement, because so high an authority as Dr. Watson admits that metastasis of rheumatism to the brain may take place, and adds—"Nay, I know that it is so—that it sometimes *is* so, but not often."*

Whoever will take the trouble to read the 7th section of my friend Dr. George Burrows' excellent work on Disorders of the Cerebral Circulation, will find there a body of evidence of the most valuable kind in favour of the non-existence of any inflammation of the brain or its membranes in this delirium. Did time permit, I could add several cases to those which Dr. Burrows has enumerated, all corroborative of the same important point in the clinical history of this disease.

TREPANNING FOR AN OLD DEPRESSION CAUSING IDIOCY.

A GIRL, ten years of age, during infancy was struck upon the top of the head; and, although the corporeal faculties had increased normally, there had been little, if any, manifestation of intelligence. The child recognised imperfectly her parents, but was unable to articulate, emitting only a species of howl: she was also subject to constant and violent convulsions. On examination, there was found a longitudinal depression, three to four inches in length by one in width, across the head, just behind the coronal suture. At the request of the parents, and with the full understanding of the danger, it was decided to remove the depressed portion. This was done with two crowns of the trepan; the opening being joined by cutting out the intermediate piece with a Hey's saw. The child lived nine days; for the first six days doing well. She died from a bleeding from the longitudinal sinus, which ruptured after some sudden and violent movement made by the patient in bed. The father thought there was an appreciable increase of the amount of intelligence after the operation, and it was obvious to every one that she took cognizance of persons and things about her in a way she had never done before.—*Dr. J. M. Warren: in American Journal of Med. Sciences*, Jan. 1850.

Original Communications.

RECORD OF CASES.

BY THOMAS MAYO, M.D. F.R.S.

Fellow of the Royal College of Physicians, and Physician to the Infirmary of St. Marylebone.

IN my late republication of the "Outlines of Medical Proof," I have dwelt, with a degree of interest which the importance of the subject appeared to deserve, on the fewness of specific remedies: I have noticed the boldness of some irregular practitioners in asserting *their* possession of such remedies; and I have inculcated the necessity that we, whose researches have made out and identified the *diseases* which the charlatan professes to cure,—that we, I say, should make our progress in that direction clearly understood, at least by ourselves. It appears to me that we know more than we give ourselves credit for, and obtain a reputation for candour somewhat at the expense of truth, by earnestly contrasting our disavowal of a moral certainty in the use of remedies with the confident presumption of the charlatan. It should be remembered, indeed, that, if the discovery of specific remedies is confessedly remote, and often accidental, every group of symptoms, in which we can uniformly annex a certain result to a certain remedy furnishes an advance in that direction.

In the following remarks I propose to illustrate the claims of opium in this modified acceptance of the term specific, and more particularly in relation to its moral and intellectual influences.

There is reason for supposing that the functions and movements of the system, or many of them at least, may give pain, or occur without sensation, under varying degrees of endowment with that property, which in its highest state is sentience,—in its lowest state is simply a conveyance of impressions. We might, indeed, have been so physically constituted as that all the operations of the body should have a distinct sensation annexed to them, and the attention be engaged by a thousand feelings from which in health we are free, or nearly so. But there are several persons to whom this immunity seems only partially extended, who, without

* Lectures, vol. ii. 2d edit.

any definite malady, are percipient of disagreeable sensations, which probably, as we may infer from their general health, indicate nothing more than the fact that they are so far exceptions to the normal state of anæsthesia. With many labouring under these perceptions, an altered and improved condition of the mind becomes curative of this distressing state. Success in worldly concerns,—the gratification of the passions and inclinations,—intellectual employment,—will often yield the improved condition. Sedatives will occasionally aid it; and opium, among these, occupies the highest place, unless ether and chloroform should dispossess it of that dignity. Again, without any definite errors of sensation being obviously imputable, there are persons who are tormented with a certain restlessness and depression of what we must call, for want of a better expression, the “animal spirits.” Such persons are open to assistance from similar agents; but in such persons the influence of the moral remedies which I have mentioned is very inadequate,—at least, they must be raised a few pegs by other means before they can achieve a state on which the moral remedies can tell. Now there is reason for believing that with these persons the medicinal agency of opium may be so adjusted, in respect to quantity and repetition, as to meet the difficulty, and to realize the benevolent intentions of Providence, which apparently in these, as in other points, wills our freedom from uneasiness, but leaves to our own ingenuity the discovery of means for attaining it.

The case of a gentleman, now aged about 56, whom I have often seen professionally in the last 25 years, illustrates the influence of opium on the form of nervous depression which I have last noticed. Of a muscular formation, of a nervous and leucophlegmatic temperament, he was subject to prolonged states of anxiety, and depressed views of real subjects. His pulse and secretions would vary but little under these states, except that his pulse became smaller. Moral exertion, and application to business, with a view to the removal of the state, were of little efficacy. Shower baths and steel suited him; mercurials depressed him further, and increased the flow of bile already rather profuse. His nights were bad, and his restlessness throughout them extreme. Some

distrust, which I formerly had as to the moderation of my patient in the use of remedies, if once from their nature they should prove an agreeable dram, made me over-cautious in regard to the use of opium. Other sedatives were given by me with some advantage, in addition to the use of shower-baths and tonics, and he had the advantage of frequent change of place. This plan was beneficial, but inadequate to the exigency. The requisite addition was made by Dr. Seymour, whom this gentleman also consulted: it was the frequent use of the acetate of morphia. The remedy was neither abused nor carried too far, and it seemed to supply the deficient element in the moral constitution of the patient. Is it not conceivable, that the great and unhappy philosopher,* whose excesses in the use of opium probably shortened his life, certainly embittered it by constantly suggesting to his mind the idea of sinful indulgence, would have found in it a remedy to certain idiosyncratic states, and not a poison, had his convictions and reason been engaged in favour of it, and not merely his inclinations?

In another case,—that of a middle-aged gentleman, formerly a fellow of a distinguished college at Oxford, who had exhausted nervous energy during his college life, by a combination of very hard reading, with a large use of wine,—I endeavoured to set up a counter-stimulant to the habit in which he still indulged, by gradually diminishing his wine, and giving him small doses of opium with castoreum in pills. I believe I should have succeeded, if circumstances had favoured an adequate continuance of the experiment.

In another case, that of a young lady, I witnessed effects obtained by opium, in regard to which I cannot detach the moral from the physical influence: it is better, indeed, in any disquisition, such as our present one, to consider the separation of moral from physical agency as only effected by a process of abstraction, and not as really existent in nature. This young lady had been a seven-months child, and was born below par. When I first saw her professionally she was about six years old, not small in size, pallid, excitable, intensely susceptible of cold, fond of the highest degrees of heat, requiring and receiving much

* I allude to S. T. Coleridge.

support. It was soon observed in her case, from the accidental use of opium in reference to occasional diarrhoea, how much more good she derived from the nutritious and strength-giving system adopted, whenever opium in some of its forms happened to be superadded. But it was not until the catamenia were approaching at the usual age, that the full importance of this remedy became obvious. The mental excitement and malaise, the intense uterine pains, which she underwent at the approach of every period, and which was allayed only by opium, made its use unavoidable; and I found myself compelled, at last, to admit, that the more regularly she used a daily dose of laudanum, the more her strength, or rather the progression of its improvement, was maintained. Thus, carefully watched indeed in reference to its effects, the dose of opium, about 40 minims, became a daily one, so as at length to excite a strong desire in my mind to discuss the expediency of the course with some other authority. The following is a note which I took at the time of the results of a consultation with Sir Charles Clark. "Feb. 5, 1847. To-day, Sir C. Clark and I met. The anæmious state of Miss J. S—; the frequency of her pulse; the tendency of cold or any other exhausting agent to produce diarrhoea; her liability to sickness or nausea when opium is discontinued, and to a kind of headache, relieved by hot applications to the head, and increased by hot applications to the feet; the antecedents generally of her case and constitution; all convince us that she must go on with the daily use of opium, and take as much steel as may suit." The latter agent had been used all along in repeated courses. The laudanum plan accordingly rolled on, and so did that great element of improvement, time. How long exactly the medical measures were continued, I cannot say. The *principle* was most successfully maintained. Miss T. S. finally strengthened into a person of average power. She is since married, enjoys good health, and has a family.

Can opium, I may be asked, be discontinued when the habit of taking it is formed by daily use? I believe it always can, when the patient is merely placed by the use of it in his normal state; he will be satisfied afterwards with this state; and no more require a continuance of the means, when the

good has been gained, than in the case of tonics, such as bark or iron.

But the most important question in regard to the use of opium at present remaining unsettled, is its application to insanity. To bring together the disjecta membra of our experience and knowledge on this subject would be most useful. Between Dr. Prichard's suggestion of 10 grains of Dover's powder 4tis, under mania, till sleep results; and Dr. Brandreth's communication to Dr. Duncan, of 400 drops of tincture thebaica given at a dose, "the relief obtained by which was like a miracle, so that in a few hours the patient became calm and rational;* between these suggestions of two eminent men, ill-explained and unapplied by their respective authors, the shades of practice are at present of but little use to the public. I shall endeavour on a future occasion to ascertain and elucidate the distinctions to which they may lead.

[To be continued.]

ON AN UNDESCRIBED MUSCLE OF THE SCAPULA.

By J. WHEIR D. BROWN, M.R.C.S.E.
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Hospital.

WHEN I began to study anatomy, the dissection of the muscle under the spine of the scapula gave me considerable trouble, on account of not finding it to be exactly as described in books, and I frequently thought I had spoilt the dissection of this part through want of expertness in the management of my knife; and consequently came to the conclusion, that my own inexperience in dissecting was the cause: but finding that many of the students at this school have experienced the same difficulty, I have considered it worth while to make, during the present session, between thirty and forty dissections of the shoulder, with the view of discovering the cause of this difficulty, and have, as I think, found it to be owing to a small fleshy muscle (not hitherto, so far as I know, described by any author), which takes its origin from the under surface of the spine of the scapula, near its

* Duncan's Medical Commentaries, page 384, vol. 16.

middle, and proceeds forward towards the neck of that bone, lying close to its spine. Its under edge overlaps the muscle below it, from which it is sometimes separated by a quantity of fat and cellular tissue, and if taken hold of and raised up by a pair of forceps, it will be clearly seen to be a distinct muscular slip, having little or no connection with the muscle (the *infra-spinatus*) below it.

Close to the neck of the scapula, the fleshy fibres of this muscle terminate in a small tendon, which is, however, fleshy upon its outer surface, and is inserted both into the capsular ligament of the joint and into the upper part of the middle depression on the great tuberosity of the humerus. The tendinous part of its under surface glides over the tendon of the *infra-spinatus*, and lies, at its insertion, between the *supra-* and *infra-spinatus* muscles. In some instances its tendon is blended with that of the *infra-spinatus*, but generally they are apart from each other. This muscle appears to be an adjuvant to the *infra-spinatus*, and receives its nerves and blood-vessels from the same sources as the other capsular muscles of the shoulder-joint.

Ellis, in his excellent work on Anatomy (page 236), while describing the *infra-spinatus* muscle, says, "that the fibres which arise from the spine of the scapula overlay the others;" and I may here observe, that I have consulted a great many other works, but have not in any of them found allusion made to the muscle here referred to. The lower edge of the muscular slip now under consideration is very thin, and lies upon the *infra-spinatus*, and, if not dissected fairly out, it will often lead the student to suppose that he has removed part of the *infra-spinatus* with his knife; but let him only carefully raise this slip up towards the spine of the scapula, and a little further dissection will then show it to be, at its origin, perfectly distinct from the muscle below it; and the way being thus cleared, the student will, at once, discover the cause of his perplexity, and be enabled easily to proceed in the dissection of this part of the shoulder; and therefore it is that I think it may be of use to draw the attention of anatomists to this point.

But if we do not consider the muscle in question to be a separate and distinct one, we must at least look upon

the *infra-spinatus* as having two distinct origins—the superior, which arises from the spine of the scapula, overlaps the second portion, the fibres running not horizontally, as some state, but a little downwards; the inferior portion, which takes its origin from the dorsum of the scapula, below the spine, as low down as the posterior ridge on the inferior costa, but not from the rough surface on the lower angle of the scapula: the two then appear to unite opposite the humero-scapular articulation, and are, apparently in connection with each other, inserted tendinous into the capsular ligament of the joint, and the middle depression on the large tuberosity of the humerus. In this way the *infra-spinatus* may be described as a doubled-headed muscle; but, from the numerous dissections I have made, I am satisfied that the muscle here described is generally distinct from the *infra-spinatus*, which may be very easily observed, when the muscles upon the dorsum of the scapula, after being dissected, are put upon the stretch: and it will, in my opinion, greatly facilitate the study of this part of the shoulder, and remove the difficulty I have heard many complain of, if the above muscle, which I have ventured to call the *infra-spinatus minor*, be kept in view; and if in future four capsular muscles upon the dorsum of the scapula be described instead of only three—viz. the *teres minor*, the *supra-spinatus*, the *infra-spinatus major*, and the *infra-spinatus minor*.

London Hospital,
April 20th, 1850.

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 26th instant:—E. B. Adams—G. Hornby—F. Goodchild—G. Garrahan—T. Y. Thompson—W. Smallpage—W. Thompson—H. P. Bannister—H. G. Allanson—W. D. P. Swain—H. G. Farish.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, the 25th of April:—Henry Joseph Stormont, Wallingford, Berks—Roger Lewis, Narbeth, Pembroke-shire—James Bishopp—John Brierly, Staley Bridge—Kelburne King—Thomas Crocker—Walter Acton, Leicester—Thomas Arthur Brandt, Manchester—George Salter, Malmesbury, Wilts.

ON HÆMORRHAGE FROM THE
UMBILICUS

AFTER THE

SEPARATION OF THE FUNIS.

BY
W. MANLEY, M.D.(Read before the Abernethian Society,
Thursday, Jan. 24th.)

HÆMORRHAGE from the umbilical vessels occurring after the separation of the cord, is a subject which has either been entirely overlooked, or has only obtained a passing notice in systematic works on the diseases of infancy. My attention was drawn to this peculiar and comparatively rare accident by a case which came under my observation in the latter end of October of the past year, while attending the patients of Mr. J. L. Worship, of Riverhead, Kent, during his temporary absence. The child, a male, a fortnight old, had been born after a natural labour, and had presented at its birth all the signs of health and strength: its parents were of the labouring class, and but poorly provided with the necessaries of life. I found that it had already for some days been affected in a marked manner with jaundice, the *icterus neonatorum*, for which small doses of the Hydrarg. c. Cret. had been administered. The symptoms of the jaundice were still very evident, and the dusky yellowness of the skin was general, and could not be mistaken for the colour of the integument peculiar to new-born children in a state of health. Moreover, the conjunctivæ presented a yellow tinge. The bowels were much relaxed during the first period of the disease; the stools were frothy, and of a lightish hue, although not the decided clay colour of the fæces in the jaundice of adults. They, however, improved in appearance afterwards, and their number decreased considerably, the Hydrarg. c. Cret. already prescribed having been continued. I omitted any attempt to examine the urine and its colour, as also many other symptoms, as my whole attention was soon absorbed by an unusual and very embarrassing occurrence. At my first visit the mother called my attention to the presence on the binder and body-linen of a few drops of blood, which

evidently came from the navel: she assured me that the separation of the cord had taken place in the usual way, and at the usual time, about the fifth day, without any violence having been used. She had, however, soon after, observed the presence of some spots of blood on the linen, when changing and dressing the child. Upon examining the umbilicus, I found the circumference of it to have a natural appearance, but the fundus was filled with a dirty-looking substance, resembling the debris of cellular tissue mixed with blood: upon washing the part clean I perceived the blood to ooze more particularly from one spot: this I touched repeatedly with the nitrate of silver, hoping that this cauterization would be sufficient to arrest the bleeding. At my next visit, however, I found it had continued; I then made pressure, as well as the struggles of the infant would allow; the hæmorrhage, however, went on, and evidently increased in quantity, to judge by the degree to which the linen was soiled with blood. I then began to experience much anxiety as to how the case might terminate. I repeated the cauterization with the nitrate of silver, applying it much more vigorously than the first time; I moreover enjoined the mother to keep up continual pressure with the thumb over the graduated compress, which I fastened over the navel as firmly as I could. The mother assured me that she continued this pressure the greater part of one night. Seeing that this was inefficient, and, as I thought, from want of perseverance, I made an application of the actual cautery in the following manner:—I heated to a white heat the extremity of a wire, and applied it freely to the spot from which the blood appeared to escape. Several other means, such as powdered alum, Ruspini's styptic, &c., were used conjointly with the actual cautery, but without any permanent good effect. Ligature or torsion of the vessel was altogether impracticable: repeated attempts to seize it with the forceps or tenaculum entirely failed; the substance which filled the bottom of the navel broke up under the most delicate application of these instruments: there was literally nothing upon which to lay a firm hold, and the blood appeared to come from a point having an indistinct resemblance to a circular depression below the level

of the skin, and sunk in the hollow of the navel. Both the cauterization with the nitrate of silver and with the heated iron had the effect of momentarily arresting the hæmorrhage; but upon renewal of the cries and movements of the infant, the eschar formed by these applications was raised up by a fresh flow of blood, and it really appeared as if this fluid had lost its power of coagulating; it was, moreover, thinner than usual, and of a lightish colour. At this period of the case, and after the several applications mentioned above had been persevered in some time without any good result, and the state of the child was becoming more and more alarming, it was suggested to me to use the powder of matipo, and through the kindness of a gentleman practising in the neighbourhood, I, after an unavoidable delay, procured some of the leaves of this styptic; but, to my regret, on proceeding to the house with the intention of applying them, I found the infant in *articulo mortis*, and any further attempt was useless. The period of time that elapsed between my first visit and the death of the child was about eight-and-forty hours: the bleeding had, however, as already mentioned, been observed by the mother a day or two previous to the patient coming under my care. No post-mortem examination could be obtained; a circumstance much to be regretted, as the interest of the case would necessarily have been much enhanced could the state of the liver and its ducts have been ascertained, as also that of the foetal vessels. I have, however, ventured to place it on record, even in this imperfect state, as corroborating many particulars related in similar cases by modern observers.

As far as I have been able to ascertain, Underwood is the first writer who has alluded to this form of umbilical hæmorrhage: he first mentions an oozing of blood from the navel as the consequence of an unkindly separation of the cord, and owing to the shooting up of a soft fungus: this is sometimes attended with a hæmorrhage, which in some instances may prove alarming: it, however, can always be arrested by caustic or compress, with bandaging. "There is, indeed, another kind of hæmorrhage," he adds, "of more importance, but this seems to be sympathetic, and is attendant upon infants who are

in an ill state of health during the month, and is perhaps a bad sign: it takes place when the cord has been apparently well healed, but the skin afterwards gives way, and the bleeding is much more considerable than in the former; it requires, however, of common sense, a proper compress and bandage." Through the somewhat confused and contradictory description given by Underwood, one fact can clearly be discerned—viz. that whatever form of this peculiar hæmorrhage he had opportunities of observing, he did not in any case consider it to be of a very serious nature, nor peculiarly intractable, still less as being generally attended with fatal consequences. We shall presently see that the results of more recent observations lead to very different conclusions.

As a contrast to the opinion of Underwood I may quote the following passage from Burns, which distinctly shows that his experience had taught him to consider this form of hæmorrhage as an accident of a formidable nature:—"Sometimes," says this author, "a day or two after the cord separates, or at the time of separation, hæmorrhage takes place: this may yield very readily to compression or astringents, but, nevertheless, may prove obstinate and fatal."

In the prosecution of my inquiries on the subject of umbilical hæmorrhage after the separation of the funis, I have derived great assistance from the highly-interesting paper of Mr. Edward Ray, read by this gentleman before the South London Medical Society, and inserted in the *MEDICAL GAZETTE* of March 9th, 1849: together with the narrative of a striking instance of this form of hæmorrhage, accompanied by a description of the post-mortem appearances, Mr. Ray has given an abstract of all the cases he had been able to meet with at the time he wrote. His publication is of too recent date to render it necessary for me to enter at any length into the particulars of the case observed by himself, and of those to which he refers; in the sequel I shall have frequent occasion to allude to the leading features of them; but with the view of continuing the history of this remarkable accident, which has been so ably commenced by Mr. Ray, I will proceed to relate, with as much brevity

as will be consistent with perspicuity, the main particulars of three cases I have found recorded in two French periodicals. I will also allude, more especially on account of the anatomical peculiarities observed in them, to the cases related by Dr. A. D. Campbell, in the Northern Journal of Medicine (vol. i. p. 237), under the title of *Icterus gravis Infantum*.*

In the number of the Archives Générales de Médecine for October 1849, the particulars of two cases are given, a full account of which was first published in the inaugural dissertation of M. Emile Dubois, a pupil of Professor Paul Dubois. In the first the subject was a male infant, eleven days old. Hæmorrhage occurred six days after the separation of the cord: it was, however, arrested by a mode of ligature adopted by Professor Dubois, which I will describe when speaking of the treatment of this accident. After the separation of the slough caused by the ligature the hæmorrhage did not recur, and the umbilicus healed; but the general state of the child did not improve; he soon exhibited symptoms of purpura, and blood was passed per anum. Ecchymotic spots appeared in different parts of the body, and death took place about the seventh week. The umbilical vein was almost entirely obliterated, as also the left umbilical artery; but it was not so with the right one, which was still pervious, and presented at intervals slight dilatations, containing small quantities of liquid blood, and some small clots.

In the other case, a healthy woman, æt. 23, was confined of her first child, a male, and well conformed: the cord separated on the seventh day, and was replaced by a small ulceration in the centre of the umbilicus. Bleeding commenced the following day, was very abundant, resisting cauterization with the nitrate of silver, compression, &c. The same mode of ligature was then resorted to as in the first case, and the

hæmorrhage was arrested: the child died, however, twelve days after, of enteritis. The parietes of the umbilical vein, and of the ductus venosus, were collapsed, but their calibre was not obliterated: the umbilical arteries had the appearance of whitish cords, with a very narrow canal and thick walls; each contained an adherent filiform clot. There was no trace of peritonitis.

The particulars of a case published by M. Thore in the Gazette Médicale de Paris (March 11th, 1848), are as follows:—The infant, a male, was 13 days old when brought to the hospital: upon examination, a few spots of dried blood were found upon the abdomen; the bleeding returned the night after its admission, and continued, without, however, being very abundant, until the eighteenth day; it appeared to yield to cauterization with the nitrate of silver: the child lived twenty days longer, and finally died of purpura and thrush. The umbilicus was almost entirely cicatrised; the umbilical arteries in the vicinity of the navel, and to the extent of about an inch, were filled with pus and coagula of blood; higher up they contained a very fluid blood; they were patulous in the remainder of their course. The umbilical vein was empty, its walls collapsed, and its calibre less than that of the arteries. Ductus arteriosus incompletely obliterated, containing a little fluid blood.

From Dr. Bowditch's paper.—Y. Z. was confined on 17th August, 1839, after a natural pregnancy and labour, of her first child, a female, to all appearances healthy: the funis separated on the third day. The child thrived until the 14th, except that there was occasionally a slight oozing from the umbilicus, with the formation of a small coagulum. On the 14th the hæmorrhage became manifest; was checked by compression, but recommenced on the following day. The umbilicus looked healthy; there was no distinct orifice, but from the corrugated centre of the umbilical depression there was a constant slight oozing of thin arterial-looking blood. Compression, slight astringents, as sulphate of copper, of zinc, were employed without effect. On 16th, the hæmorrhage increasing, nitrate of silver was applied very freely, but appeared only to increase the flow of blood. A double ligature was then passed through the

* Since this communication was made to the Abernethian Society of St. Bartholomew's Hospital, I have met with a paper on the subject of umbilical hæmorrhage after the separation of the funis, by Dr. Bowditch, published in the American Journal of Medical Sciences, New Series, No. xxxvii. pp. 6-71. I have taken the opportunity of adding an abstract of the cases contained in this paper to those I had already collected. It is singular enough, that this subject, which had hitherto passed almost entirely unnoticed, should all at once have attracted the attention of several observers.

umbilicus and surrounding integuments, so as to enclose the whole: the bleeding was arrested by this means during a space of three or four hours, but it returned: two needles were then passed at right angles to each other, through the skin, to which ligatures were applied, as in hare-lip. A circle of integuments, three quarters of an inch in diameter, was thus enclosed: the hæmorrhage was restrained. On the 17th day, the third of hæmorrhage, the compress over the umbilicus was slightly stained with blood, and some blood appeared also in the dejections: on the 18th, oozing from underneath the compress: a sugar teat used by the child was stained with blood; four bloody dejections, one clotted. A slight ecchymosis on the inside of first joint of right thumb. Several bloody dejections during the day. Constant oozing from the umbilicus. Death took place on the 20th day from birth, on 6th from the commencement of the bleeding. No autopsy was made.

In April 1840, and September 1843, the same lady had two boys, who are now alive and well, without tendency to hæmorrhage. But in January 1845, she gave birth to another child, a *male*, who died of hæmorrhage from the umbilicus. In this case the labour was natural. The child was plump and hearty, rather above the medium size; it thrived; the bowels, however, were never very freely opened; no meconium was discharged, nor yellow stools, but these were whitish, almost clay-coloured. The urine, on the contrary, was at times of a deep orange colour, as if strongly impregnated with bile. Slight icterus for a few days, but not more than is commonly seen in healthy children.

The cord separated on the 5th day; the umbilicus discharged a little purulent and bloody fluid until the 8th; on the 10th there was a slight oozing, with a spongy appearance of the interior of the umbilical aperture: from this point the blood oozed. A purpuric spot was observed by the nurse on the edge of the left scapula, about half an inch in diameter. The oozing continued notwithstanding the use of tannin and compression. Two fresh spots appeared on the right elbow. The actual cautery was then applied, by means of a large knitting needle, on the 12th day, about 48 hours after the commencement of the hæmorrhage: the child was then

of a somewhat yellowish and livid colour.* The hæmorrhage continued, and the blood showed no tendency to coagulate. Death took place four days after the appearance of the first ecchymotic spot.

The autopsy was performed 26 hours after death. There was nothing remarkable at the umbilicus, nor was there any open blood-vessel evident.

The heart was normal. The hypogastric arteries were somewhat thickened and hardened for an inch from the umbilicus, but no air could be blown through them or the umbilical vein: they contained no coagula.

The organ principally diseased was the liver, which was found to be enlarged, of a yellowish colour externally, quite flaccid, and on incision presented the following structural changes. None of the red parts were perceptible, and the cut surface looked very much like the interior of the colon when covered with soft yellow fæces; the matter was removed with the greatest ease on slightly touching the cut surface with the scalpel; it stained a linen cloth as fæces would.

The gall-bladder was small, contracted, and contained no bile; was healthy interiorly; the ducts were pervious, and contained a little yellow matter.

To these facts observed by himself, Dr. Bowditch has added a brief analysis of twelve others, published after the preparation of his paper in the *Boston Medical and Surgical Journal* for July 11th, 1849.

From this analysis it appears that death took place in every case,—in the majority from exhaustion; in one, however, the infant died comatose: the hæmorrhage from the umbilicus, in one case, was sudden, and returned suddenly after having been temporarily arrested, causing death in a few hours. In the others it proceeded gradually, and was somewhat checked by the means employed.

Jaundice was a common accompaniment, and an unfavourable sign. Bleeding from other parts was also observed. Purpuric eruptions were present in two, and bloody dejections in six. No mention is made of the post-mortem appearances in these twelve cases.

Dr. Campbell, in the paper already

* It is difficult to ascertain, from some contradictions in the report of the case, whether true jaundice did exist or not in this instance.

mentioned, has given the history of three cases of jaundice, two of which were accompanied with hæmorrhage from the umbilicus.

In the first, a lady, who had previously given birth to two healthy children, was confined of a third, a *female*, which became jaundiced the day after birth; the cord separated on the 5th day; the stools were light-coloured; the urine of a brown tinge. Hæmorrhage from the umbilicus occurred on the 9th day, after a fit of coughing. Caustics and compression appeared to arrest it, but it returned on the following day, and the child died the same afternoon. The blood which escaped from the umbilicus contained a large quantity of bile, evident from the deep tinge of the clothes.

The internal organs, with the exception of the liver and spleen, were of a pale yellow colour, and bloodless. The liver of normal size, apparently softer than usual; full of bile of the colour of burnt amber. The gall-bladder was very small and collapsed, contained only a little mucus, and *formed a close sac, having no outlet, the excretory ducts leading from the gall-bladder and liver being absent.*

In the second case, the previous history showed that the mother had already given birth to three children, two girls and a boy; the girls were still living: the boy died on the 11th day after birth. The parents stated that he became jaundiced about the third day, and hæmorrhage occurred from the umbilicus on the seventh day, two from the separation of the funis: it continued until the eleventh day, when the child died quietly. In the present instance, the infant, a *male*, likewise became jaundiced on the third day after birth: on the seventh there was an oozing of blood from the navel: this was arrested by astringents, roller, and graduated compress; the cord had fallen on the preceding day, leaving a clear and healthy surface.

On the 8th the hæmorrhage returned and continued until the eleventh day, when the child died in a comatose state, in spite of the application of various styptics and pressure, which only restrained the oozing for a short time: the quantity of blood lost was estimated at about 3iss.—*Post-mortem.* The body was of a bright yellow colour; all the internal organs, except the liver and spleen, were also yellow. There was no trace of

disease about the navel; liver slightly congested, and more dense than usual.

The gall-bladder contained a quantity of bile, which could not escape, *owing to an indurated plug of inspissated bile which occupied the ductus choledochus.*

In the third case mentioned by Dr. Campbell, there was no hæmorrhage from the umbilicus, but jaundice came on the day after birth, and the abdomen was tumid, from enlargement of the liver: the child lived to the age of six months: death then ensued, the liver having increased so as to fill the greater part of the abdomen. Upon examination, *neither a gall-bladder nor bile ducts could be discovered.*

It is difficult, on perusing these curious histories, not to be struck with the very frequent repetition of some, most prominent features. A singularity of them which has particularly attracted the attention of Mr. Ray, is, to use the words of this writer, "the peculiar disposition this kind of hæmorrhage has to attack the male sex only, and its liability to occur in a succession of male children from the same parents."

The case that came under my own observation, and several of those to which I have alluded, corroborate the first part of Mr. Ray's proposition; and one of those recorded by Dr. Campbell will be found to confirm the second: at the same time, it must not be forgotten that we have mentioned two cases in which the accident was observed in infants of the female sex. It may, therefore, be questioned whether the frequency of its occurrence in males, as hitherto observed, be not a purely accidental result, which may be no longer found to obtain, as more numerous cases are recorded. Another circumstance which cannot fail to arrest attention is the excessive mortality attendant on this accident: how this result may be modified by ulterior observation, remains to be shown: it is, however, not improbable that the cases extant have been put on record chiefly on account of their fatal termination.

The frequent occurrence of jaundice, of petechia, and of extravasations of blood under the integument, or into the gastro-intestinal canal, are not the least interesting features of this singular affection. The physical qualities of the blood are also worthy of notice: it is frequently mentioned as being of a lighter colour than natural, and pre-

showing no tendency to coagulate. The foetal vessels, in some cases, are described as containing some *fluid blood*.

With one exception, the mode in which the blood escaped from the umbilical pit, when recorded, was uniform: it was an oozing, and generally it was difficult to decide during life, and even after death, from which of the umbilical vessels the blood issued: in Mr. Ray's case, however, it distinctly appeared to be supplied by the left umbilical artery.

In my own case, I have already mentioned that it came from a spot having an indistinct resemblance to the orifice of a vessel, but it was impossible for me to determine what vessel it might be. In the first case related by Dr. Campbell, the blood contained a large quantity of bile.

In none of the cases does the quantity of blood lost appear to have been considerable, but the difficulty of estimating this loss with any degree of correctness must be very evident.

In the majority of the cases a remarkable uniformity was observed to exist in the post-mortem appearances in the foetal vessels and ducts; these were constantly found to have undergone only an incomplete degree of obliteration. Upon this subject Mr. Ray remarks, that "little is said by authors respecting the period of change from foetal to extra-uterine circulation, and the mode in which the foetal vessels become closed." From his own observations, he is disposed to believe that it is by the gradual contraction of their coats, and not by the formation of a clot within them, that the obliteration takes place.

It is, however, but justice to Billard to state, that the changes which ensue in the foetal vessels after birth were carefully investigated by him some twenty years back, and the result of his observations was that the mode of obliteration is not the same in the umbilical arteries and ductus arteriosus, as in the umbilical vein and ductus venosus: in the first it is a consequence of the thickening or concentric hypertrophy of their coats, aided by the contractility of the same. This hypertrophy Billard considers to be of an *active nature*, the blood being obliged to abandon these vessels in consequence of the organic changes which supervene in their walls: in the obliteration of the umbilical vein and ductus venosus no such hypertrophy is remarked. After the section of

the funis, the parietes of these vessels collapse, their sides become contiguous, and thus their calibre is obliterated, in the same manner as obtains in all ducts, of whatever kind, when they no longer give passage to the fluids habitual to them.

This second mode of obliteration Billard terms *passive*, and is a result, not a cause, of the repulsion of the blood. Burdach, in his *Physiology*, has also treated this question at some length; and there will be found references to several other writers, both of modern and of less recent date.

With regard to the period after birth at which the foetal vessels and ducts are closed,—notwithstanding some slight discrepancies which are observed to exist between the results of Billard's investigations and those of Berni, and other writers mentioned by Burdach, still they are all agreed on one point—viz., that the process of obliteration commences as soon as the second or third day after birth. From this it is evident that, in several of the cases I have alluded to, this natural process was defective, and not sufficiently advanced.

Still more remarkable than the imperfect state of obliteration of the foetal canals and ducts were the anatomical anomalies observed in the cases of icterus recorded by Dr. Campbell, and more particularly in two of them, where a total absence of gall bladder and bile-ducts, or of these latter only, was found to exist. In no other case that I have been able to meet with is any allusion made to a malformation or deficiency of any part of the biliary apparatus. Moreover, as a general rule, the original deficiency or absence of the gall-bladder has only been observed as a rare occurrence.*

What the precise nature was of the structural change the liver had undergone in the second case related by Dr. Bowditch it is not easy to determine, from the very brief account he has given of it. There does not appear, however, to have been any malformation, and it is clearly stated that the gall-bladder was healthy, although contracted, and that the bile-ducts were pervious. From the peculiarities observed in the foetal vessels at the umbilicus, in the case of Mr. Ray, and which are illus-

* Rokitsansky, vol. xiv. p. 360.

trated by a drawing, this gentleman is inclined to suppose that there existed some malformation at that part,—“a sort of common receptacle, in the form of a dilated artery, into which the umbilical arteries emptied themselves, from which the umbilical vein proceeded, and from which also the hæmorrhage took place through the umbilicus.” It is, however, difficult to understand how the fœtus could have lived *in utero*, had any such abnormal communication between the umbilical arteries and the vein existed at the umbilical ring.

The treatment of this very unmanageable form of hæmorrhage has hitherto proved very unsatisfactory. The reports of the cases bear sufficient evidence to the utter inefficiency of ordinary hæmorrhagics, such as compression, styptics, and caustics; even the actual cautery has failed. Moreover, from the short duration of the accident, we should not be warranted in placing much dependence on constitutional remedies alone. From these circumstances, it becomes an imperative duty on the part of the medical attendant to decide immediately between tying the bleeding vessel or vessels by cutting down upon them through the abdominal walls, or performing what is termed by French writers the ligature *en masse* of the umbilicus. The first of these operations has been advocated as a last resource by Mr. Ray, Dr. Radford, &c. It does not appear, however, to have been performed; and it is probable that, from its severity, and the difficulties attending it, many will be deterred from undertaking it. The ligature *en masse* is preferred to all other methods of treatment by M. Paul Dubois. It is executed in the following manner. A cushion is placed under the infant's loins to render the abdomen prominent. The operator introduces horizontally from left to right a hare-lip pin, which pierces the integument at the base of the navel. By means of a loop of thread passed under this pin, he raises the integuments, and a second pin is introduced perpendicularly to the first, and beneath it: the thread is then twisted several times in a figure-of-eight shape round each pin; and to complete the ligature, the base of the umbilicus is encircled with a waxed thread. The pins may be removed towards the fourth or fifth day, but nothing must be done to hasten the

separation of the eschar, which must be entirely left to itself.

A similar plan was followed by Dr. Bowditch in the first case related by him. In two in which M. Dubois used it the hæmorrhage was arrested, and was not renewed, although the children ultimately died. The result was not so favourable in the case of Dr. Bowditch, when the oozing returned on the following day, and continued until death.

M. Dubois appears to place great confidence in this mode of tying the navel, and is of opinion that it has no tendency to produce peritonitis.

Burns* entertains a different opinion, and states that a ligature round the umbilical aperture, or the twisted suture, have not only failed, but appeared, by propagating inflammation to the peritoneum, to hasten death. However this may be, the ligature *en masse* will, I think, always be preferable to the far more serious operation of tying the bleeding vessel by cutting down upon it through the abdominal walls. And when we consider the more than doubtful utility of all other means, and the loss of time incurred in applying them, it appears to me that the only safe line of conduct would be to proceed immediately to tie the navel in the manner described, as offering the best chance that mechanical means afford of arresting the hæmorrhage. Unfortunately, however, as the observations show, in these peculiar forms of umbilical hæmorrhage, attended with other signs of a diseased state of the blood, no great reliance can be placed on mechanical means of whatever nature; and, as already stated, there is but little time and opportunity for the exhibition of constitutional remedies. Nevertheless, every practitioner, in presence of a case of this kind, will feel a strong desire, as much for his own satisfaction as for that of the friends of the patient, to arrest the hæmorrhage from the navel; and for this reason principally do we advocate the ligature *en masse* in preference to the tying by incision.

The interpretation of the facts related in the preceding pages, and the consideration of the causes of this form of hæmorrhage, and of the attendant phenomena, might give rise to much speculation

* Princ. of Midwifer

Before proceeding with the few remarks I would devote to this part of my subject, it is necessary to premise that they will relate to those forms of umbilical hæmorrhage only which may be termed intractable, to distinguish them from the bleeding which sometimes accompanies the formation of fungous growths from the umbilicus, or which is the consequence of the premature and violent removal of the portion of desiccated funis, in both which cases the flow of blood is generally controlled by the ordinary remedies, when timely applied.

In presence of a bleeding which obstinately resists the most powerful and varied means opposed to it, one is naturally led to connect it with that interesting class of facts which are generally considered to be the consequence of an hæmorrhagic diathesis or constitution: and, indeed, on comparing these cases of umbilical hæmorrhage, and their concomitant symptoms of a diseased state of the blood, with the facts just alluded to, and taking into consideration the frequency of its occurrence as hitherto observed in infants of the male sex, which is well known to be a prominent feature in the history of the cases attributable to an hæmorrhagic diathesis, one cannot but be struck with the many points of analogy which they present.

The cases, however, before us are essentially deficient in one particular, which would be necessary to render the analogy more complete—namely, that in no one is the hereditary transmission of the hæmorrhagic constitution clearly proved. Now this appears to be a characteristic trait in the history of the so-called *bluter*, or bleeders, of the Germans.

In my search for cases which might bear out the analogy between these two classes of facts, I have had the good fortune to meet with one only in which the hæmorrhagic constitution appears to have been transmitted from the mother to the child. From the interest it presents, I am induced to give a brief abstract of it.

A woman, æt. 23, had during her two confinements such copious epistaxis that it was found necessary to plug the nostrils to master it. *Her mother and her sisters* were also subject to epistaxis, hæmoptysis, and abundant hæmorrhages; but the most remarkable feature of the case was, that this woman's

second infant died on the third day after birth in consequence of hæmorrhage from the umbilicus and the gums, preceded by inflammation of the umbilical vessels, of the bladder, scrotum, and left testicle. It also presented *ecchymotic spots on the left forearm*.*

That there was a diseased state of the blood, dependent on a deficiency of the fibrine, in these cases of hæmorrhage from the umbilicus, is a fact which, I think, will readily be admitted; but the determination of the causes producing this state appears to me to be a question of great difficulty. One circumstance, however, would seem to furnish some clue towards its solution,—at any rate, as regards a certain number of these cases,—I mean the presence of the jaundice which was observed to exist prior to the supervention of hæmorrhage.

The admixture of the biliphæin or colouring matter of the bile with the blood appears to determine certain changes in this fluid, one of which is a diminution of the fibrin, and, as a consequence of this, an impaired power of coagulation.† Clinical observation appears to have confirmed these results of chemical analysis. In the discussion which followed the interesting communication of Mr. Ray to the South London Medical Society, Dr. Hughes mentioned a case in proof of the tendency of jaundice to give rise to an hæmorrhagic condition of the blood, which occurred in Guy's Hospital eighteen years ago, when it was found impossible to restrain the oozing of blood from the orifices after cupping, and which, of course, ended fatally. M. Andral‡ has recorded a case of jaundice dependent on an incomplete obliteration of the ductus choledochus, with a granular state of the liver, which was accompanied during life with various sanguineous exhalations into the digestive canal, the tissue of the lungs, and sub-arachnoid cellular tissue.

* Vide Gaz. Méd. de Paris, p. 105, 1842. From the Oesterreich. Medicin. Wochenschrift.

† Vide Simon's Chemistry, vol. i. p. 187, and Dr. Horaczek, Die gallige Dyscrasie (Icterus), Vien 1844, and Brit. and For. Med.-Chir. Rev. vol. xxii. Hunter, however, only admitted this action of the bile on blood extracted from the body, and was of opinion that it could not enter the blood in sufficient quantity during life to produce the phenomenon of non-coagulation; and adds that, in the severest form of jaundice, this fluid retains a great power of coagulating.—Vide, On the Blood, vol. iii. Palmer's edit.

‡ Cliniq. Méd. t. ii. p. 534, et seq. 4th edit.

M Durand Fardel* has related a case of protracted jaundice in which the integuments were of a dark-yellow colour, approaching to green (*tirant sur le vert*). Death was the consequence of an abundant hæmorrhage from the intestines: the biliary ducts were thickened and narrowed.

Many similar cases could. I have no doubt, be met with, especially in those forms of green or black jaundice in which the dark colour of the skin does not appear to depend simply on the admixture of the colouring matter of the bile with the blood, but where it is probably produced partly by extravasation of the blood into the subcutaneous cellular tissue.

But whatever assistance we may obtain from these facts in the explanation of those cases of umbilical hæmorrhage preceded and attended by jaundice, there still remains a certain number in which the symptoms of a diseased state of the blood were quite as strongly marked, and which, nevertheless, at no period of their course exhibited any traces of jaundice. It is for these facts that I am at a loss to offer even the most conjectural explanation.

CASE OF
RUPTURE OF THE RIGHT COMMON
ILIAC ARTERY.

BY J. HICKS, Esq., Surgeon.

(Read before the South London Medical Society, March 4, 1850.)

THOMAS WOODMAN, æt. 62 years. Habit full and plethoric; for the last eight or nine years leading a sedentary life as check-taker at the Surrey Zoological Gardens; subject to gout and gravel for many years; six months since had a severe attack of both, attended with the cramps of the legs and thighs peculiar to the former disease. He was completely relieved by the ordinary remedies—colchicum, henbane, &c., and continued tolerably well until eight days before his death. He was also afflicted with paralysis agitans of the upper portion of his body. Twelve days before death he applied for relief from a hydro-

cele on the right, which on being emptied, he expressed himself as much relieved from *pain in the back*, which had teased him for some time. Six days afterwards he asked for some remedy for a severe and sudden *pain of the back*, of two days' continuance, which was believed to be gout attacking the lumbar fascia. Sinapisms were prescribed, rest, and a very warm bed-room.

Three days afterwards the pain of his back became excruciating, and he was visited at his own house.

The symptoms were now closely investigated. The pain of his back was referred to the central and upper part of the sacrum; it was neither increased by pressure, nor by any movement of the lumbar muscles, nor by position. It was constant, intense, and increasing; the hydrocele had not refilled, and the testis was free from inflammation. He complained of diminished muscular power of the lower extremities, but on being asked to change his posture, he complied without much difficulty, excepting that flexure of the left thigh gave him some pain. Sensation was nearly lost below a line corresponding with the anterior, inferior spinous processes of the ilia. No urine had been passed for sixteen hours, and a smooth, firm, globular tumor, the size of a bowling-ball, was detected in the hypogastric region, occupying the exact spot and having all the characters of a distended bladder. Bowels confined for two days; neither appetite nor thirst; has not slept for 24 hours; great depression of spirits, and anxiety as to the result of his disease; the pulse scarcely perceptible, compressible, and thready; the surface cold. There was slight ecchymosis of the scrotum, but on looking further the nates were seen so dark from extravasation, that he was turned on his side to ascertain if the colour was not the consequence of gangrene. The perinæum was of a natural colour.

The prognosis was, that the retention of urine and loss of sensation were owing to incipient paraplegia, and that the paraplegia was most probably the effect of an aneurism encroaching on the spinal cavity. The ecchymosis was attributed to the operation on the hydrocele, and the feebleness of the pulse to intense pain.

A catheter was used; no urine flowed; but although most cautiously introduced, its extremity was stained with

* Arch. Gén. de Méd. Juin 1840.

blood. It was now surmised that the bladder contained blood, for the tumor felt very solid. Three grains of opium, and ten of calomel, were prescribed for the lumbar pain, and on the next morning he reported that he had slept well; that the pain of his back was completely relieved; and that he thought he should soon be well if he could eat. Sensation, also, had returned to his lower extremities, but notwithstanding these favourable symptoms, his countenance was haggard, his eyes dull, his pulse failing, and there was some confusion in expressing his ideas accurately; it was evident that life was fast ebbing. The region of the bladder was painless; there was no desire to urinate, and nothing further was done during the day, excepting the exhibition of a dose of castor oil, which purged him freely. On the next day, myself and Dr. Murphy, who were in attendance, urged on him the propriety, may the actual necessity, of having one of the surgeons of Guy's Hospital to explore the bladder. He did not consent till the following day, when the able assistance of Mr. Cock was sought for and obtained. At our request Mr. Cock passed a flexible catheter, not being perfectly satisfied that the metallic one had entered the bladder; no urine escaped, and he now used the syringe to satisfy us that there was neither blood or urine in this viscus. He had previously examined per rectum, but nothing like distension displayed itself there. He gave no hopes of recovery, said there was internal hæmorrhage, and prescribed the oleum terebinthinæ.

Four hours after the visit, life ceased with very little alteration in the symptoms.

Post-mortem 48 hours after death.—There was great pallor of the countenance, like those who die from hæmorrhage. The tumor in the hypogastric region was quite distinct, and the ecchymosis in the nates was very diffuse. The abdominal walls were very thick with adipose deposit, and the incision being prolonged to the symphysis pubis it was now discovered that the tumor in the pubic region was caused by extravasation of blood into the cellular membrane. The extravasation in a less degree had reached as high as the umbilicus, which was filled with an irreducible omental hernia, the size of a walnut, which was filled with the

effused blood. The abdomen being opened, the omentum, mesentery, and mesocolon, were so loaded with it that they were with difficulty removed, and interfered very much with a clear view of the morbid parts. The peritoneum lining the posterior abdominal wall and pelvis was raised, and then a most extensive extravasation showed itself. The cellular membrane of the whole pelvis was injected, and it had advanced on each side of the bladder into the pubic region, where it formed the tumor resembling so much the distended bladder. In the left lumbar region the blood was unconfined, and had reached as high as the kidney; it was not contained in cellular membrane, and the clot was at first sight mistaken for the psoas muscle. It was removed in a mass, and within its centre was a white fibrinous mass. The abdominal aorta was divided. About an inch above its bifurcation a finger was introduced, and passed downwards, and on reaching the division, the right common iliac was found ossified at its commencement. This artery was opened its whole length: the smoothness of its lining membrane was nearly gone. Here and there were calcareous, or rather bony deposits; and when removed from its site, an irregular opening, about the size of fourpence, was seen, which had perforated the middle coat, and of course the cellular coat also.

The bladder was nearly empty. The kidneys and ureters, I regret to say, were not examined, for some of those reasons which usually present themselves in private houses; but the hand pressed along the ureters and kidneys could not ascertain that there was a fulness of the glands, or of their secreting ducts.

This case proves tolerably, the fact, long entertained, of the connection between gout, gravel, and aneurism. There was probably no connection between the cramps of the legs and thighs, in his last attack of gout, and the diseased artery. These cramps frequently attend gout, and a simply diseased artery is evidenced by no peculiar symptoms. The question of greatest interest is at what time the artery first gave way into the cellular membrane of the loins. I believe it to have been about the seventh day before his death, when the pain became so excruciating.

Pain of the back is not diagnostic of aneurism of the abdominal aorta, unless the aneurism is large, points backwards, and presses on the nerves, or is causing interstitial absorption of the bone. I know a gentleman who is now suffering from aneurism of the descending aorta, just where the œsophagus opens into the stomach. He has no pain in the back, but he has distressing dysphagia, and has once vomited an immense quantity of blood.

From very good authority, I have heard that a few days after Mr. Cook had seen my patient, a female was admitted into Guy's Hospital for retention of urine. Strange to say, he himself was called on to pass the catheter. The difficulty was so great, he found the parts so changed from the unskilfulness of former operators, that it was not without an amount of consideration and care quite unusual that he at last succeeded. The difficulty was attributed to a tumor pressing on the urethra; but the post-mortem revealed a case almost identical with that of Woodman.

Some persons were inclined to think my patient died of suppression of urine. His symptoms, however, never varied from the first day. Dr. Murphy considered that the profuse loss of blood, the looseness of bowels from the castor oil, the trifling thirst, and the perspirations, fully explained why there should be no urine; for, in many cases of poisoning, or where there is a great shock to the system, the absence of urine in the bladder is not rare. Beck reports many such cases. The symptoms, however, were those of loss of blood, for there was no coma, as usually attends fatal cases of ischuria renalis. In the female admitted into Guy's Hospital, the symptoms preceding dissolution were very nearly similar; yet there was no suppression here; it was merely retention.

There might have been a mechanical obstruction on the left side, but the right was quite unembarrassed, and free to perform its functions. The ureter, however, on that side was not distended. I must, however, allow that the case would have been more satisfactory if the kidneys had been examined.

Newington, Southwark.

MEDICAL GAZETTE.

FRIDAY, MAY 3, 1850.

SOME of our contemporaries have been recently occupying themselves in speculating on the proceedings of the Royal College of Surgeons, and in making idle conjectures respecting the course which the Council were likely to pursue. One of them thus wrote on the 27th April:—

“WHAT MUST THE COLLEGE DO?”

“We have delayed noticing a rumour, to the effect that the Council of the College of Surgeons had resolved to adopt the *laissez faire* system of policy, and to decline recommending to the Government any plan for the better regulation of the Profession, in the hope that the College would see the imprudence and injustice of inaction, and boldly issue their propositions. It appears, however, that they are unwilling to effect such an alteration in the constitution of their own College as the Profession require, and they have no expectation that any measures they may propose with the view to a compromise of opinions and interests will be accepted: hence they have determined to let matters take their course, regardless of what may be the issue, so that their own vested interests are secured. The Government and the Profession are both treated with disrespect by this neglect; and perhaps the Government will discover, in the reluctance of the Council to propound a plan, an obstinate and irrational clinging to undue privileges, and a sufficient reason to step in and legislate, whether the Council like it or not, upon just and comprehensive principles.”—*Medical Times*, Ed. Art. April 27.

This is rather amusing, as an unlooky prediction on the plan which the Council of the College had resolved to pursue, i. e., to “let matters take their course,” when the very important documents which we elsewhere print,* bear date four days earlier than this editorial announcement. A lapse of this kind

* See page 771.

will, however, occur in the best regulated journals; but it should convey a strong caution against relying too much upon idle rumours.

Our readers will perceive from the letter addressed by the Council of the College to SIR GEORGE GREY, that they have not been idle, but that they have seriously considered the whole subject of medical legislation in reference to its general bearing on the profession. They have also entered fully into the questions which have lately engaged the attention of the numerous respectable meetings of Provincial practitioners in different parts of England; and we feel bound to state that, although the concessions made will not meet the wishes of some who desire the separate incorporation of a new College, or of others who think medical practice will be improved by the introduction of the universal-suffrage principle, the suggestions thrown out in the letter to Sir George Grey contain the basis of sound and satisfactory medical legislation. In the first place we wholly disbelieve that the voice of the medical profession in this country is in favour of the establishment of a new College of General Practitioners. One of our contemporaries, who was rather inclined to support this view some weeks since, says in a recent number, in speaking of the different Provincial meetings on Medical Reform, "The question of a New Incorporation was *emphatically negatived* (in the provinces) on every occasion where it was at all invoked.* The various memorials and addresses published in our columns also bear witness to this fact; and if further proof be required, we need only refer to the pages of our highly respectable contemporary, the *PROVINCIAL MEDICAL JOURNAL*,† in confirmation of our views. The only advocate of a new College is

the *MEDICAL TIMES*; but the realization of such schemes do not depend on the opinions of journalists. In order to be successful, they must have a wider basis in the feelings and wishes of the whole profession; for every practitioner in the empire, whether he be physician, surgeon, or apothecary, must have his interests affected by so great an innovation as that proposed. The Council of the College state in their letter that "they have strong reason to believe that any such new Incorporation would be distasteful to the majority of that part of the profession of which it is proposed to be the representative and head;" and so far as publicly expressed opinions may be allowed to weigh in the scale, this statement is strictly correct. Not only is the majority of the profession adverse to the scheme, but, until we have direct evidence to the contrary, we do not believe that even one-tenth part of the medical practitioners of this country would sign their names to any petition for the foundation of a new College.

With regard to the representative principle, it is our opinion that more importance has been attached to its general extension than it deserves. Any member of the College may earn a vote by becoming a Fellow, and may thus, if he desire it, have a voice in the control of the affairs of the College; and, under the new resolutions, the power of voting by written papers sent from a distance is conceded. Again, all those who were members at the date of the charter may become Fellows without examination, and thus acquire a control in the management of the College. In what respect would the profession be benefited by giving to every member a vote in the election of members of Council? There will be a large body of electors qualified to judge of the merits of candidates, and sufficiently numerous to prevent the evil

* *Lancet*, April 30th, p. 461.

† April 17, p. 215.

effects of *cliquism*. This is really a great step in advance for the prevention of abuse; and one which should be duly considered and compared with the past system of management, before the universal suffrage-screw is applied. This has proved to be no panacea for political evils, but rather a considerable aggravation of them; and we entertain the greatest distrust of its introduction into our professional institutions. It will lead to feuds and dissensions, to club-voting of the worst kind, and to the transference of the real power of conducting the affairs of the College into the hands of a few active spirits, who may have more zeal than discretion, and whose professional acquirements may not be such as to command the respect of the public, or of their own body. We say, therefore, to each member who thinks himself aggrieved by not having a vote in the affairs of his College until he has attained the fellowship—Look at the question in a reasonable light: *respice finem*,—such a vote would only apparently give power, but its value would sink to an evanescent quantity by the mere fact of its being conferred as a right on every member. It would be no longer a privilege: its value would be lost, and, if really exercised, perhaps swamped by some "John Hunter Club" of rural members voting in a body against the candidate. The College have conceded this great principle;—any one may hereafter attain a vote in its affairs by conforming to certain conditions within the reach of all future members, and of those whose diplomas were dated before the charter of 1843. We feel that they who became members immediately after the date of the charter may have some reason to complain of their exclusion, as, having been since engaged in practice, they cannot resume the studies necessary to a qualification for the fellowship. There never was a law yet

passed, however, which did not inflict injustice somewhere; and all that the law-maker is bound in equity to perform is that the new rule should inflict the least amount of injustice, and upon the smallest number of persons. How far the Council of the College have attained this desirable end by their new resolutions it will be for the profession to decide. We feel, however, bound to state, from information which has reached us, that the resolutions recently issued, and now published in our columns, may be taken as the *ultimatum* of the Royal College of Surgeons on the medical reform question.

We have yet hardly glanced at many of the important suggestions contained in the letter addressed by the Council to SIR GEORGE GREY. They contain the germ of an excellent medical reform measure, to which, we think, on careful deliberation, the majority of the profession will be prepared to give their assent. This is likely to be an eventful week in reference to medical reform. At the time we write it is announced that Sir George Grey intends to receive a joint deputation from the Provincial Medical and Surgical Association, and it is understood that one object of this interview is to protest against the incorporation of a new College. At the same time, the Minister will have it in his power to lay before the deputation the latest resolutions of the Council of the Royal College of Surgeons on the admission of members to the fellowship, and the future constitution of the College.

Now that the excitement which existed at the anniversary meeting of the Royal Medical and Chirurgical Society has well nigh, if not altogether, subsided, the still small voice of admonition may be listened to with more patience than would have been the case some weeks ago.

We would, then, ask, in all seriousness, whether there be still some master grievance which perils the well-being of the Society? If there be, why not take that peaceful mode of redress which the constitution of the Society prescribes, whenever a majority of the fellows desire a change? It is not wise to let any such feeling of dissatisfaction smoulder, without bringing it to the test which the rules of the Society permit.

If the mode of electing the Council be vicious in the judgment of many fellows, why not take the constitutional means of redress at once, instead of again blaming the Council for preparing a "house list,"—a duty which the Society by its own *bye-law* compels them to discharge. The Council has no power to alter a *bye-law*,—the Society has. Surely, then, the Society will not again so stultify itself as to reproach the Council with doing what it has required it to do.

Then, again, if the Society is dissatisfied with the principles by which the Council is guided in making the selection of the "house list," why not quietly and constitutionally suggest in what respect it is objectionable?

The following are the rules upon which the Council act in making the selection:—

- "Seniority on the list of the fellows.
- "Contributions to the Society's Transactions.
- "Distinction for works of merit.
- "High professional character.
- "With reference to the President, Vice-Presidents, and Treasurers, official service shall be considered; and in the instance of the Secretaries and Librarians, special fitness for their respective offices.

We confess that these rules appear to us to be most judicious; but again we say, if they are obnoxious, let it be shown in what respect they are so.

Then, again, as to the ordeal through which a paper passes for the purpose of

enabling the Council to determine upon its fitness for publication: if it be vicious, let it be shown in what particular it is so. We have reason to know that the Council have had this matter under their anxious consideration, and that certain changes, — improvements we hope they may be found, — have been made in the arrangements with regard to the mode of obtaining reports upon papers.

The Royal Medical and Chirurgical Society has now been in existence forty-five years. It has published thirty-two volumes of Transactions; and it is not too much to say, that no Medical Society in Europe has published a series of Transactions to be compared with them. It has included among its members, with few exceptions, all the highest and ablest men in our profession. It has obtained a reputation second to none in Europe. Is there a Fellow of that Society who would desire to see its lustre tarnished? Is there a Fellow who would not keenly feel himself disgraced if by any act of his its reputation suffered? We cannot think there is.

Therefore, we say, if there be any obstacle to the best working of the Society, take the simplest means to apply the remedy. We say this in all earnestness, because if there be one truth more obvious than another, it is—that "a house divided against itself cannot stand."

MEDICAL AND CHIRURGICAL SOCIETY.

THE Council have just awarded to Mr. Williams £20 for the preparation of a most useful catalogue, which is thus mentioned in the last Anniversary Report:—"A manuscript, classed 'Catalogue of the More Important Works in the Library,' which the Council believe will be found very useful to the Fellows, has been compiled and presented to the Society by Mr. Williams, the sub-librarian. The preparation of this volume must have been a work of much time and labour, and is highly creditable to the zeal and efficiency of the Society's sub-librarian."

Reviews.

Some Account of the Last Yellow Fever Epidemic of British Guiana. By DANIEL BLAIR, M.D., Surgeon-General of British Guiana. Edited by JOHN DAVY, M.D. &c., Inspector-General of Army Hospitals. 8vo. pp. 161. London: Longmans. 1890.

THE description, with which this work opens, of the physical characters of British Guiana, and of Georgetown, its chief city, presents us with conditions the most favourable for the development and spread of malarious disease, and infectious fevers of all kinds. They are such as rather to excite surprise at their occasional absence than at their general prevalence.

"The colony," the author observes, "is a tropical Holland. Behind the empoldered lands extends an almost endless succession of creeks, savannahs, and forests; and, in front fringed with a thicket of aquatic trees, quicksand, and mud-banks (the alluvial elements of the country) stretch out into the muddy sea."

"Within the city of Georgetown, in 1837, besides the private drains, there belonged to the public thirty-one miles of open trenches, varying in width from two to ten feet, communicating by six y-tunnels, and these required to discharge the surface water of the city alone."

We may add, that the author describes one side of a long street running parallel with the river, as built on the mud-bank, and supported on piles and platforms over the water. These buildings are called "stellings;" beneath these collect any bulky materials, which, floating down the river, become entangled in the piles.

Dr. Blair attributes the origin of the epidemic yellow fever of 1837 to local causes. The first cases, he states, occurred to Dr. Alleyne, and were apparently aggravated cases of ordinary fever, of which "some cases terminated fatally at the time when the severity of the symptoms had ceased, and when he supposed the patient convalescent." Dr. Blair traces the history of the epidemic, and its connection with local circumstances, and scouts the very idea of the possibility of contagion.

"The grand predisposing cause of an at-

tack of the epidemic was the state of constitution, induced by a previous and recent residence in a cold climate. The grand exciting cause, during several years, was exposure to the influence of certain localities, the chief of which was the embouchure of the Demerara River. Georgetown and the shipping being situated within the malarious locality, and their population containing the largest proportion of northern blood, the disease began there first, and continued there last." (p. 58.)

Again, at p. 54:—

"There was not a single person, professional or non-professional, in the length and breadth of the colony, who in 1838, after the first alarm had subsided, had the least suspicion of contagion in our yellow fever."

Dr. Blair gives a good description of the symptoms, progress, and pathological appearances observed in the disease, the latter being illustrated by coloured engravings.

This work, albeit it has a predetermined non-contagion bias, is deserving the study of all who, without prejudice, desire fairly to examine both sides of the question of the contagiousness of yellow fever. We admit, moreover, that Dr. Blair has adduced strong evidence in favour of a local origin, but not conclusive as to its manner of propagation. And there the case ends, as far as Dr. Blair's writings are concerned. These might have been permitted to pass quietly among the historical documents of the disease in question: but, unfortunately for Dr. Blair's reputation as a candid and independent inquirer, he has entrusted the preparation of his work for the press to Dr. John Davy, Inspector-General of Army Hospitals.

Upon the common-sense principle of *noscitur a sociis*, Dr. Blair shares the imputation of one-sidedness and partisanship which Dr. McWilliam has brought against Dr. Davy in our journal (page 611 of the present volume). Our readers will find that Dr. Davy asserts that Dr. King conclusively proved the Boa Vista fever to have had entirely a local origin. But Dr. Davy nowhere states that Dr. McWilliam (no mean authority, although totally unnoticed by Dr. Davy) had made a contrary report (*having gone out a decided non-contagionist*), being convinced, from facts the most unmistakeable, that the fever had been introduced into the island from the Eclair steam vessel;

and that it spread among the inhabitants of the island by no other means than contagion.

If Dr. Davy and our readers will take the trouble to peruse Dr. M'William's report, or the notices thereof, contained in the pages of the *MEDICAL GAZETTE* (N. S. vols. iv. v. vi. and ix.), they will arrive at the unanimous conclusion that Dr. King did not make good his case.

We were greatly surprised to find that Dr. Davy made no mention of Dr. M'William's report, which is conclusive against his own views, while he brings forward imperfect and partial evidence which happens to square with his preconceived notions. We could in no way account for this omission but upon the supposition that Dr. Davy was unacquainted with the existence of Dr. M'William's report; and we thought that such striking deficiency of information detracted greatly from the value of his editorial notes. The correspondence lately published in our pages, and to which we have already alluded, leaves us still further in the dark, as all explanation of this unaccountable defect is wanting on Dr. Davy's part. Are we to suppose that Dr. Davy, in the spirit of a partisan, intentionally suppressed evidence which he knew would be unpalatable in certain high quarters? We will not believe this—we trust that Dr. Davy has a truer love of science than to throw any such obstacles in the way of the determination of an obscure question.

Contributions to the Practice of Medicine: on the Revulsive Agency of the Skin, with cases. By L. F. CRUMMEY, Member of the Royal College of Surgeons of England, &c. Pamphlet, p. 91. London: Simpkin and Co. 1849.

"To the professional reader, the author does not suppose that his little work will supply anything new, save matter for criticism." Mr. Crummey speaks the truth here, but not the whole truth—there is not even anything in the book that offers novelty for the critic—'tis the oft-told tale. A strong necessity is laid upon an author to write a book—but the necessity is of his own making. Thence results the stringing together of common-place ideas to make "a book, although there's nothing in it." In the instance before us, however, there is

something in it; but all the world knew that something long enough ago.

Mr. Crummey has written a book composed of extracts from Mr. Erasmus Wilson's work on Diseases of the Skin, combined with his own details of ordinary cases, illustrative of the physiology and pathology of the skin—and dedicates it, as in duty bound, to Mr. Erasmus Wilson (an equivocal honour)—but for what class of readers, except the "*invalid*," we cannot perceive. It is too professional to be fit for general readers, and not professional enough for professional men. Mr. Crummey may plead in extenuation of his offence, that "it is a very little book;"—we admit the plea.

Proceedings of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, April 23, 1850.

DR. ADDISON, PRESIDENT.

Case of Disarticulation of the Left Condyle of the Lower Jaw, with excision of nearly the left half of the bone. on account of a very large cartilaginous Tumor growing from and occupying the site of all this part of the bone, save the condyle and neck. By W. R. BEAUMONT, Professor of Surgery in the University of Toronto, Canada.

THIS patient, a child *æt.* 7 years, was admitted into the Toronto Hospital, September 17, 1849. The tumor, on his admission, extended upwards to the zygoma and malar bone, almost covering the temporo-maxillary articulation. It reached downwards to fully an inch below the angle of the jaw, extending inwards into the mouth as far as the mesial plane backwards beyond the ramus of the jaw, and forwards to the posterior bicuspid. It pushed the tongue quite to the right of the mesial plane, concealed the velum, and almost completely filled the isthmus faucium. The molar teeth of the upper jaw were deeply embedded in the tumor, which kept the mouth at all times open, with a constant dribbling of saliva, the upper and lower incisors not meeting by fully half an inch. The tumor had been first observed three months back. September 25th, 1849: Professor Beaumont performed the operation for its removal, commencing by making a curved incision (the concavity up-

wards), extending from the lobule of the ear to the angle of the mouth, dissecting off the integuments from the tumor. The tumor was firmly wedged in under the malar bone. The outer wall of the jaw was cut vertically through with a small straight saw. The section was then at one stroke completed with a strong bone forceps. The condyle was disarticulated by being firmly grasped in a forceps, the joint being opened by dividing the external lateral ligament and capsule.

The patient did very well. A small stationary fistula was formed in the cheek, which eventually healed. On December 1, 1849, the patient was quite well. The right half of the lower jaw was drawn a very little towards the left side, about one-eighth of an inch. The external cicatrix was a mere line.

A Case of very Large Hematocele of the Spermatic Cord, proving fatal after ten years. By WILLIAM BOWMAN, F.R.S., Professor of Physiology in King's College; Assistant-Surgeon to King's College Hospital, and to the Royal London Ophthalmic Hospital. To which is added, *A Case of very Large Hematocele of the Tunica Vaginalis, in an old man, terminating fatally.* By THOMAS BLIZZARD CURLING, Surgeon to the London Hospital.

The subject of this case was a farmer, set. 60. Ten years before his death a tumor, with ecchymosis, appeared in the right groin, after a fall from his horse. It long remained stationary, and after seven years suddenly enlarged, during walking, to an enormous size, and involved the scrotum, there being general ecchymosis of all the parts involved. When the integuments had regained their natural colour, the tumor was punctured, and some mixed arterial and venous blood escaped. The puncture healed, but the tumor gradually increased, when, in December 1848, it formed a mass reaching from the groin to the patella, of many pounds weight, and resting permanently on the thigh, on which, by its great weight, its hinder surface was, as it were, moulded. It was now again tapped, and this operation was now followed by decomposition of the contents, and the formation of much gas within it; so that, when shaken, the sound of air and fluid mingled was perceptible. Mr. Bowman then saw the patient with Mr. Paget, of Leicester. He was exceedingly reduced, and suffering from great constitutional irritation. Many large veins ran transversely over the tumor; the right testis was at the lowest point of the swelling, resting on the knee-joint, and apparently quite uninvolved. Two incisions were made, giving exit to

several pints of putrid fluid and clotted blood, and to much gas. The man, however, died a few days subsequently. No post-mortem could be obtained.

Mr. Bowman alludes to the rareness of hæmatocele of the cord, to the cases recorded by Pott, and to the notices of it in the works of Boyer and Curling. He also comments on some published cases of Sir A. Cooper, and of Mr. White, of Manchester, bearing an analogy to the one he details. He considers that the practical conclusions to be deduced from a general view of these cases is, that true hæmatocele has little tendency to undergo spontaneous cure, and that sooner or later it will probably enlarge and prove fatal. There should, therefore, be no unnecessary delay in carrying out the ordinary practice of laying open the cavity by a free incision, when the persistence of the swelling and other circumstances indicate the presence of extravasated blood, and when a previous trial of milder measures shall have evinced their inefficacy to bring about absorption.

Mr. Curling's case is that of an old man, who had suffered for many years from a hæmatocele of the tunica vaginalis. It had never been shown to a surgeon, till its great size, and the occurrence of inflammation, complicated with retention of urine, led to its being treated. Mr. Curling saw him with Mr. Pritchett, and made an opening, by which three pints of dark grumous blood were discharged. On the patient's death, a week after, the exact nature of the disease was ascertained by dissection.

The next meeting will be held on Tuesday, the 14th May.

ACADEMY OF MEDICINE, PARIS.

April 16, 1850.

Cholera Reports.

M. AMÉDÉE DE MOULON transmitted a report on the cholera at Trieste in the months of September and October, 1849. The author considered that his report proved the cholera to be a contagious disease, becoming epidemic when it has spread to a large number of individuals, and in its decline again becoming sporadic.

M. DENIS stated, in his report of the epidemic in the district of Toul, that the disease is never contagious, but always epidemic; and yet, adds the author, "some individuals may receive it by infection."

M. FIERET, of La Chapelle en Thierache, considered the infectious nature of cholera to be an established fact.

New Plessimeter.

Dr. A. BOUGERA, of Naples, transmitted, through M. Pierry, a model of a plessimeter, which is so constructed that the stroke is made by a hammer on a plate of ivory. M. Pierry stated that this instrument is open to the objection that the intensity of the percussion cannot be regulated at the will of the investigator.

Glandular Inflammation of the Neck—Adenitis Cervicalis.

An essay, by M. H. Larrey, was read, entitled "On Cervical Adenitis or Adenopathy, observed in the Military Hospitals, and on the Extirpation of Glandular Tumors of the Neck."

M. LARREY observed, that inflammation of the cervical glands, occurring in young healthy men, is much more frequently met with in the military than in the civil hospitals: and, reasoning from the statements of his illustrious father, and of M. Meislin, it was much rarer among the soldiers of the Republic and of the Empire, than it has been since the Restoration.

It is evident, observes M. Larrey, that the occurrence of *adenitis* in soldiers otherwise healthy and strong men, above twenty-one years years of age, must be owing to some peculiar circumstance connected with their calling; all recruits who present glandular swellings being rejected on that account, and none being admitted into the army under twenty-one years of age.

This specific cause M. Larrey finds in the lateral apertures of the sentry-boxes, which, he remarks, expose the soldier on guard to the sudden suppression of the perspiration on the face and neck; excited perhaps by a sally, or by their patrol duty. Ophthalmia, catarrh, cutaneous eruptions of the face, &c. are, from the same cause, of very frequent occurrence among this class of soldiers, while officers are comparatively exempt from these affections, and from *adenitis*.

Added to the preceding cause, M. Larrey mentions the peculiar character of that portion of the soldier's dress which encloses the throat. M. Larrey also states that a cold moist climate favours the production of *adenitis*.

With regard to prognosis, M. Larrey observes that it is unfavourable, on account of the liability to the recurrence of the disease under similar conditions.

The treatment must be conducted with regard to hygiene, to constitutional and local, and to surgical treatment. The latter, consisting in the removal of the glands, M. Larrey has found the most certainly effectual, when previous treatment does not exert a decidedly beneficial influence.

M. ROUX stated that he had observed, in civil hospitals, the same increased frequency in the occurrence of *adenitis* within the last twenty-five years, and attributed the fact to the abuse of tobacco.

M. ROOMOUX remarked that the Turks are robust men, although great smokers. He thought that too much was charged to the injurious effects of tobacco.

ACADEMY OF SCIENCES, PARIS.

April 15, 1850.

Treatment of Recto-vaginal Fistula.

M. JOBERT (de Lamballe) transmitted an essay on his new mode of cure, which he designates *autoplastie par glissement*.

(Our readers will find the steps of this operation fully detailed at p. 350 of our last volume).

Signs of Death.

M. A. LEGRAND requested that the contents of a sealed packet which he had transmitted in November 1846, should be communicated to the Academy. The object of the author's work was to point out a phenomenon which he had observed as a constant sign of real death.

A healthy eye during life, M. Legrand observed, reflects three images of a lighted taper held before it, and continues to present the same phenomenon for a short time after death. In proportion, however, with the evaporation of the fluids and the shrinking of the transparent tissues of the eye, this phenomenon decreases in distinctness, until these cease to reflect any image at all, and thereby furnish an unerring indication of death.*

Radical Cure of Lachrymal Tumors and Fistula without Operation.

M. GIRAULT proposed a plan of treatment which he stated he had found successful. This consists in purgation, frictions with iodine to the seat of disease, astringent collyria to the eyes, astringent injections to the nostril, and a bandage furnished with discs applied for the purpose of local pressure.

M. A. MERBIER stated that he had relieved a case of retention of urine by excision of the prostatic valve.

M. PELLARIN gave the results of his researches into the history of the cholera at Brest in 1849, and concluded that it had an exclusively local origin.

* The fact of the shrinking of the transparent tissues of the eye was noticed and recorded by Louis many years since.—See MED. GAZ. N.S. vol. ii. p. 138.

SURGICAL SOCIETY OF PARIS.

April 17, 1859.

The Use of the Microscope as a Means of Diagnosis.

M. GIRALDES stated, that, having examined with the microscope a portion of a tumor removed by M. Michon,* he had found it to consist of true osseous tissue, and to have been formed by consecutive layers of bone deposited by the periosteum.

MM. MARJOLIN, LARREY, HUGUIER, and GIRALDES, stated several instances in which the diagnosis of cancerous tumors had been made out by the aid of the microscope.

On the Return of the Omentum in Penetrating Wounds of the Abdomen, and in Hernia.

M. ROBERT, having quoted the opinion of Larrey, that the protruding omentum in wounds of the abdomen may be often left untouched without dangerous consequences, stated he fully concurred in the opinion, and had acted upon it during the last fifteen years. M. Robert also related a case in which he had recently followed the practice with successful results. The manipulation required for the return of the omentum, M. Robert observed, excites inflammation, and inflammation of this organ is especially prone to terminate in suppuration. M. Robert has never seen ill effects follow the adhesion of the omentum to the abdominal parietes. M. Robert had in several cases permitted the omentum to remain extruded, and, after several days, had excised the strangulated portion.

M. H. LARREY considered that M. Robert had mistaken his father's intentions: in the case to which allusion had been made the omentum was left out provisionally. He should himself prefer to make an incision for the return of the omentum, in preference to leaving it strangulated in the wound.

MM. HUGUIER, GUERHANT, and MICHON, declared themselves opposed to the proposal of M. Robert, and dwelt upon the increased risk of the extension of inflammation to the peritoneum, incurred by leaving the omentum protruded.

M. MAISONNEUVE detailed the particulars of a severe case in which he had successfully employed M. Robert's operation of *autoplastie par glissement*.

* See Report of Proceedings of this Society, MED. GAZ. Jan. 25, p. 163 of present volume.

Correspondence.

ALTERATION OF THE POSITION OF THE TEETH IN THE ADULT.

SIR,—I was called upon by the lady to whose case the accompanying sketches refer, relative to some false teeth being placed in her mouth, she having lost a single tooth (first bicuspid) on each side, which was aggravated by the canine upon one side being pressed inwards and forwards,—inwards so far as to preclude it from being seen by ordinary observation, and forwards so far as to cause the lateral incision to project beyond the regular arch in front.

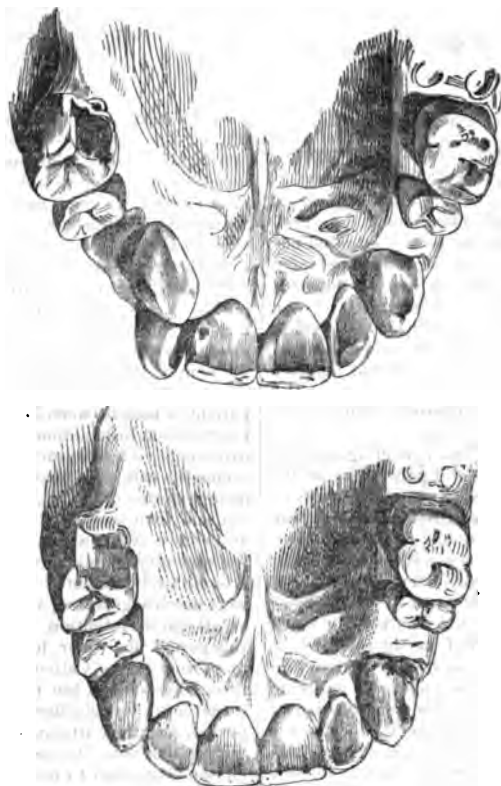
Her idea was, to have the canine, which was worse than useless, both for appearance and mastication, removed, and its place, together with the lost teeth, replaced by artificial teeth, which would be regular and more useful.

Upon examination, I found the canine to be a firm, strong, and healthy tooth, and that several of her teeth were more or less decayed; I therefore felt that I should be doing her an efficient act of kindness if I could bring this sound and valuable tooth into its normal and useful position.

Having pointed out my doubts, and the advantages of success, I removed a stump of the first bicuspid, and adapted a plate to her mouth, which on each side capped the first molar and second bicuspid teeth. The object in doing this was twofold: first, it kept apart the front teeth during mastication, and allowed not the under (which bit between the canine and incisors) to interfere with its progress; secondly, it supported the teeth against the power which I was about to apply. The force directed upon the canine to bring it backwards and outwards was given by passing over the teeth a stout band of vulcanized India-rubber, which I brought to a stretch outside the second bicuspid, and looped over the first molar. This I continued until the canine was brought outside the lower arch. The cause which first induced me to cap the teeth being then removed, I took them off, but allowed the plate to remain.

When the canine (which, after it had passed outside the under teeth, fell rapidly into its place) was successfully treated, the band was placed over the lateral, which was rapidly drawn to its proper situation.

The case took about three months and a fortnight, during the whole of which time the patient was not debarred from any of her accustomed habits either at the table or in society, and, remarkable to say, it for the time cured her of a diurnal pain



in the side arising from indigestion,—the cause being, I presume, that with the plate in her mouth she was obliged to take a longer time, and pay more attention to mastication, than she otherwise would have done.

I record this case because I believe that much more may be effected to benefit the teeth surgically than is done, and that many valuable teeth may be restored to usefulness if properly treated; whereas numbers such are removed to give place to artificial substitutes, which, however valua-

ble in their place, are not to be thought of in comparison with such a restoration as that to which this case refers. I am aware that such has often been done for children and young persons; but the accompanying case shows that much may also be done for persons much older, since the lady to whom the case refers is upwards of thirty years of age.—I beg to subscribe myself,

Yours very obediently,

G. SPENCE BATE.

Swansea, April 17, 1850.

PEDICULAR DISEASE.—DR. REESE'S NOTES OF HOSPITAL PRACTICE.

THIS affection is happily rare in this country; but a few cases have occurred in the hospital, one of which was as remarkable as any recorded in the foreign books. The patient was not merely covered with living lice upon every square inch of his body, but they were constantly issuing from the pores of his cuticle, beneath which they existed in incredible numbers. By scraping any part of his skin with a stick, or any

other solid body, hundreds of living lice would fall out of the abraded cuticle, and might be collected upon a sheet of paper, as was several times done, for exhibition to visitors. In other respects the man was in tolerable health, but so stupid that but little of his history could be learned, and nothing of the origin or duration of the disease. He was cured by the external application of dilute ung. nitr. hydrarg., with a very slight pytalism.—*Dr. Reese, in American Journal of Medical Sciences.*

Hospital and Infirmary Reports.

KING'S COLLEGE HOSPITAL.

Nævus—Division of Stricture—Necrosed tibia—Removal of.

On Saturday, March 23, Mr. Fergusson performed several operations. The first was a case of nævus in a child, situated behind the ear; it was small, not being larger than a good-sized pea: it was of the arterial kind, involving the skin, and a very fit case for strangulation by ligatures, which Mr. Fergusson effected in the usual manner.

After this operation was effected, another instance of nævus was brought before the pupils of a totally different nature from that one just operated on.

It was very extensive, spreading over the side of the right jaw and parotid region for two or three inches; it was also different from the former case, inasmuch as it was chiefly subcutaneous, and apparently composed more of venous ramifications than of a plexus of minute arteries, although, doubtless, it was, like most of these subcutaneous nævi, composed partly of the ramifications of veins, and partly of those of arteries. Mr. Fergusson had operated in this instance the week before, by applying ligatures to the most prominent portion of the tumor, and strangulating it: the threads had now separated, and it was seen how effectually a considerable extent of this large nævus had been destroyed by this process; for a large open sore existed in the situation of the ligatures, showing that the strangulated portion had been destroyed by sloughing, and that the cure was going on effectually. Mr. Fergusson stated that although only a part of the tumor had been interfered with, it was possible that the whole might be cured by that which had been already done: if not, he could apply ligatures to any other portion which might remain, at a future period.

Several very interesting and complicated cases of stricture of the urethra are at present under Mr. Fergusson's care in the hospital. One of them is particularly worthy of notice. It is an instance where the operation of puncturing the bladder above the pubis had been resorted to in a young man, in consequence of retention of urine from obetinate stricture: the consequence is, that as the thickened parts themselves were not attacked, the operation was only of immediate benefit; there is a large fistulous opening in the perinæum, and two apertures above the pubis, through which the urine escapes; a considerable part of the urethra is contracted, and no instru-

ment can be passed: the consequence is, that the patient is in a miserable condition, reduced to a great degree, suffering much from hectic. It is Mr. Fergusson's intention to lay the stricture freely open, but prior to this operation some little time is allowed for the improvement of the condition of the patient, who has only just been admitted into the hospital. We shall at a future period give a more detailed account of this case, and describe the operation when it is performed.

Another instance of the same disease, but of less severity, was brought before the pupils to-day, and Mr. Fergusson performed the operation of division of the stricture by external incision through the perineum. We will give a slight sketch of the previous history of the case. The patient, a man between 36 and 40, has laboured from his childhood with difficulty in urinating. At the early age of 5 he was under the care of a medical man in consequence of this difficulty, and of his wetting himself when he walked about. About ten years since he had a gonorrhœa, since which the difficulty in making water has increased. About twelve months ago his symptoms were much aggravated, and he suffered from an attack of retention of urine, and since this period his water has merely dribbled away from him. Catheters have been used from time to time, but none could be introduced into the bladder for a considerable period, although attempts have been made. On his admission to the hospital, Mr. Fergusson attempted to pass instruments, but it was impossible to get anything through the stricture, which was tough and irritable, situated in the bulb of the urethra in front of the triangular ligament; there were no fistulous openings in the perinæum, but the urine was loaded with copious mucous deposits, showing a great amount of irritation of the bladder, which called for some decided relief. Mr. Fergusson therefore determined to lay the stricture freely open. Previous to this operation, however, a careful attempt was made with the catheter whilst the patient was under the influence of chloroform, but it was impossible to get through the stricture: the operation was then proceeded with in the following manner.

The patient being placed in the position for lithotomy, a sound, with a groove in the centre, was carried down to the face of the stricture, and held there by an assistant. An incision was then made in the centre of the perineum, and the knife was carried into the groove of the staff, and run forward until a portion of the stricture was divided. The staff was then carried still onwards, and the knife further used until the greater portion of the stricture was di-

vided. A full-sized silver catheter was now introduced, and an attempt was made to pass it into the bladder, the knife being at the same time used to cut the remainder of the stricture; at this step of the proceeding there was great difficulty, and the silver instrument could not be carried into the bladder: this, therefore, was removed, and Mr. Fergusson carried a No. 8 gum-elastic catheter into the urethra, which, with some manipulation, very readily entered the bladder, and was retained there. There was very little hemorrhage in this case.

Mr. Fergusson stated that in these cases when difficulty was met with, as in the instance before them, it was owing to his not being able to hit the opening in the triangular ligament after having divided the structured portion in front. One thing very worthy of notice here was the facility with which he passed the gum-elastic catheter after the silver instrument had been tried in vain. He had experienced the same thing before in these operations. We have particularly noticed this before in the hands of this surgeon; and we a short time ago witnessed this circumstance in the hands of another able surgeon who performed the same operation. In this case there was so much resistance to the silver catheter that it was very nearly split in two; yet on attempting a flexible instrument it went in, although no more of the urethra was divided.

A patient, a young lad, was then brought into the theatre, who was suffering from extensive necrosis of the right tibia. It appears that some months ago he had had an injury to the leg, consequent upon which inflammation had ensued, which had ultimately terminated in necrosis of a considerable portion of the tibia. The whole tibia was considerably enlarged, and here there were openings through which bare bone could be detected. About the middle of the limb was an exposed portion of bone, about an inch in length, completely necrosed. Mr. Fergusson therefore commenced the operation by slightly enlarging the opening in the skin, and attempting to remove this portion with the forceps; but this was found impracticable: consequently, by means of a small saw, and by the aid of the cutting pliers, a division of this portion of dead bone was effected, and then each end was extracted from the case of new bone in which it was embedded: there was no difficulty with the lower portion, but the upper extremity, which was upwards of two inches in length, was firmly encased in new structure, and it required some exertion and manipulation before its extraction could be accomplished.

The operator then attacked a portion

lower down in the leg: here dead bone, loose, but encased in new bone, could be felt through a small opening in the latter, and it was necessary to cut away a portion of this before the dead bone, about an inch and a half in length, could be firmly laid hold of and extracted. The operation was thus concluded. Mr. Fergusson stated that he had, in all probability, removed the entire portion of the necrosed bone: if, however, any small particles remained behind, these would be able to find a passage through the opening which had now been made by him.

April 4th.—We are sorry to have to report the death of the patient upon whom Mr. Fergusson performed the operation of division of the stricture by the perineal section. There was no unusual amount of bleeding after the operation; the patient went on pretty well for the first few days, although he never seemed in a very favourable condition. The wound, however, looked healthy, and the urine came freely away. Although he was a fine-looking and apparently healthy man, he seemed depressed more than usual. On the tenth day serious symptoms showed themselves: his pulse became quick; his tongue dry; and he got more depressed: liberal nourishment and stimuli were given him, but he continued getting lower. His pulse became very rapid and small; his tongue was quite dry; and his countenance had that peculiar dull and listless appearance which denotes great prostration of the vital powers. Stimulants in large quantities were given, but without the effect of rousing the patient at all from this condition; and he died on the 29th, thirteen days after the operation.

On post-mortem examination the abdomen was found perfectly healthy; there was not the least extravasation of urine within the pelvis. On opening the bladder it was found thickened; its mucous coat was considerably congested; patches of ecchymosis here and there; there was a cyst, which would contain a filbert, behind the opening of the urethra: the neck of the bladder had not been at all reached in the operation. There appeared to have been little or no reparative action about the wound made in the operation. On opening the chest the heart was found to be small, and there was a large quantity of fat about it; and the muscular walls, especially those on the right side, were much thinner than natural: the lungs presented a very examguine appearance.

This was a somewhat remarkable instance of death arising after this operation, when there was nothing connected with the proceeding which had itself directly produced it; there was neither much ha-

morrhage at the time nor after any kind; was no inflammation or any extravasation of urine produced by too free incisions which would have led to a fatal result. The patient appeared to die from sheer exhaustion rather than from the irritative fever which is most frequently marked after operations upon the urino-genital apparatus. The post-mortem examination disclosed a condition of the heart which must always be unfavourable in the subject of any severe operation; and it is highly probable that the cause of death was mainly owing to this state of the organ of the circulation: and this view will be more striking when it is considered that the most prominent symptoms during the fatal illness were those of simple depression. It may be remarked that the kidneys, although congested, appeared to be healthy.

In the case of artificial anus connected with old disease of the hip-joint, which we brought under notice (see March 15), there has been a progressive improvement since Mr. Fergusson last operated. Another small portion of the opening has united, and that which remains is contracting. The patient has a natural evacuation every morning, most of the feces coming away per anum, comparatively little coming through the artificial opening. The patient has considerably improved in health and spirits. It is the opinion of Mr. Fergusson that the remainder of the opening will heal up by contraction and granulation. In order to assist this, the parts are kept very clean, and broad straps of adhesive plaster are carried across the wound from buttock to buttock. If, however, the opening should not entirely close of itself, Mr. Fergusson will endeavour to unite it by a further operation.

The case of cleft palate which Mr. Fergusson operated on by his new method, and which we reported in the same number of this journal, succeeded admirably: every portion united by a very firm adhesion. It is Mr. Fergusson's habit to allow the stitches to remain until they begin to cause some ulceration, and then to remove them: this generally happens on a third or fourth day. The patient is not allowed to talk, and is allowed nutritious broths and other fluid nourishment from the first, instead of being permitted to starve for twenty-four or thirty-six hours, as was once the custom.

In the two cases where amputation at the ankle-joint was performed, admirable stumps have been made. It will be remembered that sloughing took place in the posterior flap of each: in the one it went

only just far enough to permit of the formation still of a most excellent stump, as there had been perhaps a redundancy of covering; but in the other instance the ends of the bones were exposed, and a second operation was performed by Mr. Fergusson, removing about an inch of their extremity. No further sloughing took place, and an ample cushion of soft parts has been formed. In the first instance the patient is running about the hospital with the aid of his crutches, and is wearing his shoe over the stump; but the last-mentioned patient is still in bed, in consequence of a troublesome suppuration of some of the inguinal glands, which, however, is now declining.

Medical Intelligence.

THE MEDICAL REFORM QUESTION.—LETTER FROM THE COUNCIL OF THE COLLEGE OF SURGEONS TO SIR GEORGE GREY.

To the Right Hon. Sir George Grey, Bart., Her Majesty's Principal Secretary of State for the Home Department, &c. &c.

SIR,—In compliance with the desire expressed in your communication of the 2d ult., the Council of the Royal College of Surgeons of England, after a careful consideration of the latter paragraphs of the letter of Sir James Graham, dated the 23d March, 1846, "with respect to the principle on which the election into the Council was regulated," to which you specially directed their attention, submit to you such alterations in the constitution of the College as they deem desirable, provided you see fit to advise her Majesty to empower the Council to nominate an additional number of Fellows, in accordance with the resolution of the 4th of February last, which the President had the honour of presenting to you. At the same time they beg to state unequivocally, that any communications which may have been laid before you, except the resolution in question, are entirely unauthorized by the Council.

Before adverting to the alterations which they propose in the Charter, the Council of the College respectfully remind you that it was at the instance of your predecessor in office they voluntarily surrendered powers granted by their former Charter, with the full understanding that the Charter which they received, with its fundamental changes in the constitution of the College, was an integral part of the measure for regulating the whole profession, which was embodied in Sir James Graham's first Bill of August 1844. They do not complain of the aban-

document of that Bill, though they may be allowed to express their regret that they were thereby deprived of the protection offered by the proposed legislative measure against attacks caused mainly by the reformed Charter which they had been induced to accept. But having willingly submitted to all the reforms which her Majesty's Secretary of State for the Home Department deemed requisite and sufficient for the benefit of the profession and the public, they trust that the claims of the College, as the sole legally authorized institution in England for the promotion of scientific surgery and for the examination of surgeons,—claims which have been recognised in all preceding Charters, and which they are at all times prepared to substantiate as conducive to the public interests,—will not now be overlooked nor forgotten by her Majesty's Government.

The Council of the College have reason to believe that the alterations in subsequent Bills, calculated to affect injuriously the interests and usefulness of the existing Colleges, were adopted at the instance of an association of medical practitioners calling themselves the National Institute, who, assuming to be the representatives of the general practitioners or surgeon-apothecaries throughout England, demanded the institution of a College of General Practitioners, and claimed for this new College the unrestricted right of regulating the education, and of testing the qualifications, of candidates for their diploma in all branches of medical science, surgery included.

Against the establishment of a College which would be, in truth, a rival College of Surgeons, the Council, in a statement dated the 5th of June, 1845, addressed to her Majesty's Secretary of State for the Home Department, respectfully protested. They said—"The Council of this College do not object to the incorporation of General Practitioners, if it should be found necessary in order to fulfil purposes of public utility which cannot be accomplished by the two existing Colleges; but they protest solemnly against such incorporation in a form which, in assuming a name and powers to which it has no legitimate claim, invades and annuls functions vested in the College of Surgeons." And they observe—"In conclusion, the Council, appealing to the estimation in which the diploma is held, and the high character which English surgery has attained, in proof that the rights and privileges conferred on the College by Royal Charter have been faithfully employed for the intended purpose of advancing the science of surgery, hope and trust that the services and claims of the Institution will be fully considered before

any legislation for the regulations to be adopted; that no new Institution authorized to assume a name implying functions hitherto entrusted to this College, nor be empowered to interfere with or supersede it in its legitimate province of testing the qualifications of surgeons, and conferring on them the legal authority to practise surgery."

But the Council cannot doubt, on referring to the published declarations of the Council of the National Institute, that a necessity for the proposed College was urged, on the plea of the existence of unworthy motives on the part of the Colleges of Physicians and Surgeons to lower the standing and education of those engaged in general practice. It is alleged by them that those engaged in the practice of all the branches of the medical art are necessarily better informed on each and all than those who devote themselves especially to the study and practice of medicine, or surgery, or midwifery, or pharmacy; but that, in order to secure the amount of education required, and the implied rightful supremacy of general practitioners in connection with it, the establishment of an appropriate or independent College is indispensable.

The Council need scarcely remark in respect of the latter allegation, which is alone worthy of notice, that the education of all who are preparing themselves for the medical profession, whether as physicians, surgeons, or general practitioners, is, and must be, essentially the same in its objects and primary appliances; and that the differences in the attainments and qualifications of individuals cannot but depend upon the differences of mental abilities, and of the amount of time and labour devoted to the whole course, or to special parts, of professional study. They hardly need observe that those selected for public appointments as physicians and surgeons of hospitals, or as teachers of the various branches of medical science, are such as have distinguished themselves by their proficiency in their several and peculiar departments of the healing art; and that wherever, as in the metropolis or other large towns, the requisite conditions are present, the primary and immature state of the profession, represented by general practice, is superseded more or less by the distinctions of physician, surgeon, obstetrician, and pharmacist, without, however, violating the obligation which, consisting in the recognition of the same fundamental principles, maintains the common professional unity of all. The Council have no hesitation in adding, as the result of their long experience, that in the qualifications of their members, as destined for

general practice, they dare not require any higher standard of surgical education than is compatible, on the one hand, with the needs and safety of the public, and, on the other, with the length and consequent expense of a course of study which may be proportionate to the scale of remuneration of the majority of general practitioners; and they believe that the infallible consequence of raising unduly the standard of education would be practically the evasion of any qualification, and the surrender of the poorer classes under any surgical emergency into the hands of the vendors of drugs and other uneducated persons.

The Council of the College further desire to impress on the attention of her Majesty's Secretary of State for the Home Department, that in connection with the grant of their late Charter, which was mainly intended to provide a constituency for the election of the Council, they obtained the sanction of her Majesty's Government to a plan, which they had long contemplated and cherished, of improving the education and qualifications of surgeons. By the provisions of that Charter they were enabled to institute a class of Fellows of the Royal College of Surgeons of England, who are thereby authorized to be the electors of the Council, and become entitled to that distinction by proofs of a liberal general education, of a longer course of study, and of a larger amount of professional knowledge, practical and scientific, than the College could venture to require of those who had hitherto sought the diploma as Members. It would be out of place for the Council to enter into details, especially as they may refer for further explanation to the statement dated May 25th, 1844, relating to the Charter of 1843, and to its operation, immediate and prospective. But the Council may be permitted to affirm that the possession of the name and privileges of a Fellow is limited by no other conditions or restrictions than those of moral character, of high education, and of superior professional attainments, and that he is in no respect prohibited from general practice, or from being in any and every sense of the word a general practitioner. The object of the Council of the College of Surgeons was that of improving the education and qualifications of all surgeons and of general practitioners, as surgeons, inclusively; and, instead of showing any disposition to lower the standard of education of general practitioners, they have actually and undeniably provided the means of raising that standard, and have put within the reach of all general practitioners the means of placing themselves on an equality with those who practise surgery as their especial vocation or claim to distinc-

tion. At the same time the Council venture to point out and to recommend to the notice of her Majesty's Government, that the design of depressing the class of general practitioners, with which the Council of the College of Surgeons have been charged by the Council of the National Institute, cannot fail to be carried into effect by the establishment of a College of General Practitioners, proposed by the latter Council; for, should this new College institute a standard of education equal to that required by the Colleges of Physicians and Surgeons for their Fellowship, the general practitioner will disappear before the druggist and chemist, who will be necessary to supply his place among the poorer classes; and should it adopt a qualification, such as the needs of society imperatively demand, suited to the wants and means of the majority of the people, and calculated for the ordinary emergencies of professional ministration, the proposed College, in being exclusively that of the general practitioners, would exclude them, as a separate and lower class, for ever from the rest of the profession. The desire of the Council of the College of Surgeons is to render the admission to their College the proof, as far as possible, of the character of a competent surgeon; but at the same time to make that admission, in every case where the circumstances of the member permit it, the grade or step to the Fellowship, and, it may be, to the highest honours of the College.

It has been, therefore, with feelings of sincere and unmitigated regret that the Council find their motives in instituting the fellowship have been misconstrued, and that their design of elevating thereby the character of surgeons has called forth a spirit of opposition and hostility to the College, which the explanations offered to its members do not appear to have extinguished or softened in the minds of some of the general practitioners, who were not included in the lists of nominated fellows. The Council, however, notwithstanding the injustice of the charges with which they have been assailed, and the delay which will be occasioned in the development of their plan, are unwilling that any sense of wrong should continue to alienate any portion of their members, and not less that it should prove a bar or impediment to a comprehensive legislative measure, of which the urgent need is universally acknowledged, for the regulation of the whole profession of physic and surgery, and for the settlement of questions bearing on the interests of the profession and of the public, of far more importance than the titles and designations which are to be borne by practitioners in surgery.

And in proof of what they advance they need only advert to the provisions, contemplated in any enactment of the Legislature, for the superintendence of the Profession by a Supreme Board or Council, for ensuring thereby a high and uniform qualification throughout the empire, for regulating the reciprocity of practice in the three kingdoms, for the authorized registration and public notification of all qualified practitioners, and for securing the public against the pretensions and malpractices of uneducated and dishonest persons. With the sincere desire, then, of healing all differences, the Council have had the honour of submitting to you their Resolution of the 4th of February last, with the earnest prayer that they may be forthwith empowered to nominate to the Fellowship without examination, and under the conditions only of the prescribed certificate, those who, having been members of the College at the date of the Charter of her present Majesty, now are, or when they shall be, members of twenty years' standing.

In compliance with your wishes, the Council have deliberately considered the alterations in the Charter and Bye-Laws which they may deem requisite or desirable, provided the powers for which they have applied should be granted by Her Majesty's Government; and they have the honour to transmit to you the accompanying document, in which such alterations are specified and set forth. It will be seen that in the provisions for the contemplated revision of the Charter, the mode of election into the Council, proposed by Sir James Graham on the 23d of March, 1846, and designed to secure a succession of the ablest councillors, holds a prominent place; and it will not be unnoticed that the ineligibility of Practitioners in midwifery to seats in the Council has been removed, and that electors, whose residence at a distance, or whose engagements prevent their attendance, may vote by transmitting papers to the College.

But the Council feel that they would have incompletely complied with the instructions conveyed in your letter of the 2d of March, had not they considered the proposed "alterations of the Constitution of the Royal College of Surgeons in relation to the Medical Profession generally," and in connexion with the contemplated Act of Parliament for the better regulation of medical practice throughout the United Kingdom. They regret that the Conference, held under your sanction at the College of Physicians, terminated their labours without any satisfactory solution of the grave questions, the consideration of which had been entrusted to them:—though this undesirable result could not but have been foreseen throughout the negotiations,

since it depended upon the recurring difficulty, if not impossibility, of providing for the claim that the proposed College of General Practitioners should be inclusively, what the College of Surgeons already is, namely, the Institution by Royal Charter for the promotion of scientific Surgery, and the legally recognized authority for regulating the education and testing the qualifications of surgeons. The Council then are fully convinced that, if the proposed College of General Practitioners is intended to act in concert with the existing institutions, the establishment of such College is impracticable. They have also strong reason to believe that any such new corporation would be distasteful to the majority of that part of the profession, of which it is proposed to be the representative and head; and they can assert with confidence that the dignity and interests of the profession, and of the general practitioners inclusively, would be better consulted by entrusting its contemplated functions to the College of Physicians. They willingly acknowledge the zeal and industry which the Society of Apothecaries have shown in executing the task imposed upon them by the Act of 1815; but they believe they are only stating the opinion of the general practitioners when they say that the control of the medical education, and the examination of members of a profession, would more fitly devolve on the College of Physicians than on a trading company. It is true indeed that a desire has been expressed on the part of some of the general practitioners that the College of Surgeons should assume the place and functions of the proposed College of General Practitioners, or, in failure of this design, that a new and independent College of Medicine and Surgery should be established: but the Council, in their answer of the 5th of February last to the Council of the National Institute, deemed it their duty to express their opinion of these proposals in the following manner:—"They believe that the College (of Surgeons) would then cease to be regarded as the institution especially designed for the promotion of scientific surgery; and that by admitting to the Council others than those, who as surgeons of hospitals, teachers, eminent practitioners, or original inquirers, in surgery, maintain its scientific character, the diploma of the College would lose the high estimation which has hitherto induced those preparing themselves for general practice to seek it *voluntarily* as the best guarantee of their surgical qualifications and professional character. They cannot, therefore, consistently with the object for which the College of Surgeons was instituted, consent to any proposal for in-

introducing into the Council these who practise pharmacy. The Council of the College are no less adverse to the proposal of instituting a 'National College of Medicine and Surgery,' intended more or less to supersede the Colleges of Physicians and Surgeons, and the Society of Apothecaries. They are convinced that the proposal of the chairman of the Associated Surgeons, viz. — 'That the new college must be independent of all others, and must possess the right of granting diplomas in medicine and surgery, which shall entitle the holders to practise in all the departments of medical and surgical science, and to fill all government and public appointments,'—tends inevitably to abolish those distinctions which have been hitherto beneficially recognized as marking the relative claims of medical practitioners to the confidence of the public, and which, by preserving the highest standard of education in those who have the means of attaining it, maintain and elevate the character of the whole profession. And they especially hold that it would most injuriously affect the interests of every one calling himself a medical practitioner to diminish the authority or contract the influence of the College of Physicians—seeing that the general character and respectability of the profession not only depends greatly upon the character of those who are distinguished members of it, but that the fellows of the College of Physicians have ever been distinguished by the same education and training as the gentry of the country, by their learning and attainments in literature, by the aid which they have given to the progress of science, and by their association with the learned and scientific bodies of the metropolis."

Impressed with these convictions, and supported by the express desire of many, that the College of Physicians should undertake the duty of testing the medical qualifications of those about to be engaged in general practice, the Council lost no time in conferring with the authorities of the College of Physicians on this important subject, and they have the satisfaction of stating that the College of Physicians, without a dissenting voice, have acceded to the proposal. The Council then cannot entertain a doubt that, probably under similar arrangements to those of Sir James Graham's Bill of 1844, no difficulty will be found in instituting boards for examination in anatomy and surgery, and in medicine, midwifery, and pharmacy, such as cannot fail to obtain the concurrence and support of all well-informed general practitioners and of those who seek the license for general practice. And when it is considered that the College of Physicians, no less than the College of Surgeons, offers

facilities to all who have passed their examinations for rising into the higher grades, which are distinguished in each College only by higher education and proficiency, it will be felt that the distinctions are anything but invidious, and that no intention can exist of maintaining exclusive classes in a profession, which, requiring the grades and distinctions that mark the relative qualifications of its members, no less demands a common bond of professional unity.

The Council of the College believe, however, after a careful consideration of the various plans suggested during the late years of medical agitation, that the reform and organization of the profession in England would be best completed by an amicable alliance and union of the Colleges with the Universities. They believe especially that the Colleges of Physicians and Surgeons might advantageously co-operate with the University of London: and that as, on the one hand, the Colleges, in accordance with their peculiar objects and ordinary functions, possess and could always supply most efficient provisions for examinations in medicine and surgery, practical and scientific; so, on the other hand, the academic degrees of the Universities, when conferred upon such examinations, might be safely combined with the licence to practise without further examination.

In carrying out this scheme, intended for the reciprocal advantage of the Universities and Colleges, and for the benefit of candidates for admission to the medical profession, the Council would see no reason to alter the professional distinctions recognized in Sir James Graham's bill of 1844, of physicians, surgeons, and licentiates in medicine, surgery, and midwifery. But these distinctions are not designed to have anything exclusive in their character. In placing the qualifications of the whole profession under the conditions of university education and of academic degrees, it would be obligatory on all to pass through the same probationary gradations and examinations; and though it could not be avoided that some, or the majority, would be under the necessity of commencing their professional career under the least distinguished designation, these even could not but feel that they had entered with all other aspirants at one and the same professional portal, and might at any future time, under favouring circumstances and more ambitious views, raise themselves into a higher professional grade. And thus there would be provided for those who occupy a less fortunate position in the profession a sustaining ground of hope, and that elevating sense of union with their more distinguished brethren which is calculated to foster self-

respect; whilst those distinctions would be preserved which are necessary to elicit individual excellence, and to secure the highest proficiency in the profession collectively.

Finally, the Council of the College of Surgeons beseech Her Majesty's Government—in considering the public services of a profession whose rewards are wholly disproportioned to their indefatigable labour, their hourly danger, and their unwearied zeal—to rescue the medical profession, by the exertion of the influence of Her Majesty's Government with the legislature of the country, from the serious evils of protracted agitation.

(By order of the Council)

JOSEPH HENRY GREEN,
President.

JAMES MONCRIEFF ARNOTT,
JOHN FLINT SOUTH,
Vice-Presidents.

Royal College of Surgeons of England,
23d April, 1850.

Resolutions of the Council of the Royal College of Surgeons of England respecting certain alterations deemed necessary in the Charters and Bye laws of the College, and to which they request the sanction of the Secretary of State for the Home Department.

1. *a.* That Members of the College at the date of the Charter of her present Majesty, and of twenty years' standing, be admitted to the Fellowship; and that the mode of admission be by the recommendation of six fellows, the payment of ten guineas, and the vote or ballot of the Council.

b. That the following be the terms of such recommendation:—

"We, the undersigned Fellows of the Royal College of Surgeons of England, do from our personal knowledge of the high moral character and professional attainments of A. B. of C. declare that in our opinion he is deserving of the honour of the Fellowship, and that he does not openly trade in medicines." We therefore recommend the said A. B. to the Council to be admitted a Fellow of the College."

c. That members in the army and navy be admitted to the fellowship under the like conditions, their certificate and recommendation being to the same effect, and signed by six fellows, or by the heads of the medical departments of the respective services.

d. That members in the service of the East India Company be admitted to the Fellowship under the like conditions, their certificate and recommendation being to the same effect, and signed by six fellows,

or by the Secretary of the Military Department of the Company.

e. That members resident in the colonies be admitted to the Fellowship on the like conditions, their certificate and recommendation being to the same effect, and signed by six fellows, or by the Governor of the Colony, and certified by the Colonial Secretary.

f. That the application of every member for admission to the Fellowship, in the manner above provided for, shall be accompanied by a declaration signed by himself that he does not openly trade in medicines.

g. That this Council do, from year to year, admit to the Fellowship, by vote or ballot, under the foregoing conditions, the members of the College at the date of the Charter of her present Majesty as they shall respectively become members of twenty years' standing, until the whole of the list of members at that date shall be gone through.

2. That fellows of the College practising midwifery shall not be ineligible to the Council.

3. That no fellow of the College shall be eligible to a seat in the Council unless he shall have been a member of the College for twenty years, or a fellow for fourteen years.

4. That all vacancies in the Council shall be filled up annually in the month of July, unless at any time the members of the Council shall be reduced below eighteen, in which case the Council shall direct a special meeting of the fellows for the filling up of the said vacancies, at such time as the Council may judge proper.

5. That the day appointed for the election of members into the Council, with the number of vacancies therein, shall be announced in the London Gazette, and in such other manner as the Council may direct, such day being not less than thirty days and not more than forty days from the publication of the London Gazette in which the said meeting shall be announced.

6. *a.* That every eligible fellow desirous of becoming a candidate for a vacant seat in the Council shall signify the same to the Secretary, transmitting with such notice a certificate according to the following form, signed by six fellows, viz. :—

b. "To the President and Council of the Royal College of Surgeons of England.

"We, the undersigned Fellows of the Royal College of Surgeons of England, do hereby certify, on our own personal knowledge, that A. B. of C. does not practise, and has not at any time during five years preceding this date practised pharmacy, either directly or indirectly; that he now

resides, and *bona fide* practises his profession of a surgeon within five miles, by highway or road, from the General Post-Office, in St. Martin's-le-Grand; and that he is, in our estimation, a fit and proper person to be a Member of the Council of the Royal College of Surgeons of England, and we do hereby nominate him a candidate for a seat in the Council.

"Dated this day of 18."

c. That such certificate and nomination shall be invalid unless received by the Secretary within fourteen days from the publication of the London Gazette in which the meeting of the fellows shall be announced.

d. That every eligible fellow desirous of becoming a candidate for a vacant seat in the Council shall transmit, together with the certificate of six fellows, required by the foregoing resolution, a declaration signed by himself, that he does not practise, and has not at any time during the five years preceding the date of such declaration, practised pharmacy, either directly or indirectly.

7. That should any certificate or declaration required by the foregoing resolutions contain any untrue statement, the fellow to whom the same shall apply shall, if elected, be removed from the Council.

8. That the nomination of candidates by any one fellow shall not exceed the number of vacancies to be filled up; and should any fellow nominate a greater number of candidates, such fellow shall not be allowed to vote at the election.

9. That the list of the names of the candidates thus nominated, with the names of the six fellows by whom they shall respectively be so nominated, together with a notice of the day appointed for the elections, shall be transmitted through the post-office to each fellow in the United Kingdom whose residence shall be known to the Secretary.

10. That the voting for the election of fellows into the Council shall be by marked lists; and every fellow shall be at liberty personally to deliver in at the meeting appointed for the election the list of candidates forwarded to him, as before directed, or to transmit such list to the Secretary, provided the same, if transmitted, shall be received by the Secretary two clear days before the day of election.

11. That fellows voting as above for a greater number of candidates than there shall be vacancies to be filled up, will render their respective lists or voting papers invalid.

12. That the names of members of the Council going out of office by rotation shall, if they are desirous of re-election, be placed at the head of the list of candidates;

and, if re-elected, shall take precedence of all others elected into the Council on the same day, and shall, with respect to each other, take precedence according to their former seniority on the Council.

13. That the examinations for the Fellowship shall be held twice in the year, at such times as the Council may appoint; and that the Court of Examiners be authorised to hold special or extraordinary meetings for such examinations whenever the same may be found necessary.

14. That the Council shall have the power to elect to the Fellowship annually, without examination, under such conditions as they may establish by bye-law; two members of the College of not less than twenty years' standing, on payment of the usual fee.

15. That all fellows hereafter elected to the office of Examiner shall go out of office at the end of five years from the time when he may have been elected, but the Council shall have the power of immediately re-electing him; and, if re-elected, he shall take precedence in the Court according to his former standing as a member thereof.

(By order of the Council)

EDMUND BELFOUR,
Secretary.

23d April, 1850.

PETITION OF THE ROYAL COLLEGE OF PHYSICIANS IN REFERENCE TO THE GRIEVANCES OF NAVAL ASSISTANT-SURGEONS.

THE humble Petition of the President and College or Commonalty of the Faculty of Physic in London, under their common seal, presented by Sir ROBERT HARRY INGLIS.

We, the President and College or Commonalty of the Faculty of Physic in London, in the discharge of the trust reposed in us by the Legislature for the maintenance, honour, and well-being of the faculty of physick, in all its branches, do now approach your honourable House with an humble petition, that you will be pleased to take into consideration, with a view to their removal, certain grievances, to which, under official regulation, the assistant-surgeons of Her Majesty's navy have long been subjected, and which materially impair their means of usefulness in the care and protection of their shipmates' health.

Your petitioners have at various times been informed, and, upon due inquiry, have found full warrant for believing, that the position at present assigned to the assistant-surgeons of Her Majesty's navy, being in no way adequate to the consideration which they enjoy in civil life, or to that which attaches to the medical officers of corresponding rank in Her Majesty's land forces, is of necessity incompatible

with the influence and authority which the nature of their professional duty imperatively requires.

We, your petitioners, submit with confidence to the liberal feeling and deliberate judgment of your honourable House, that scientific men of mature age, and thoughtful habits, such as the assistant-surgeons now serving in Her Majesty's navy, are by us, your petitioners, known to be, should be admitted on equal terms to the society of the ward-room officers of the ship in which they serve; and that, in right of their official rank, defined by order of the Lords of Her Majesty's Council on January 23, 1896, they should no longer be deprived of the privileges implied by ward-rooms, accommodation.

Instituted as a College of Physicians on grounds of service to the public health, and zealous for national feeling in all that has regard to the comfort and efficiency of the seamen employed in Her Majesty's navy, we, your petitioners, should be wanting in our duty did we hesitate to assure your honourable House, that from the nice manipulations, and the close, careful observations at present required from those engaged in the practical application of medical sciences, there is an urgent necessity that the assistant-surgeons of Her Majesty's navy should be furnished, while on ship-board, with all possible opportunities for study and reflection, and that they should not be compelled, from want of a separate cabin, to forget the responsibilities imposed upon them as officers of health.

In further support of our claim as public functionaries to be heard with indulgence by your honourable House, we beg further to inform your honourable House that several of the licentiates, and certain of the fellows, of the Royal College of Physicians are now serving, or in times past have served, as medical officers in the ships of war of Her Majesty's navy.

Thus associated, in our corporate capacity, with the medical department of the British navy, and acknowledging, moreover, in the spirit of our royal charter, a fellowship of purpose and interest with all those of our countrymen who exercise the honourable faculty of physic in any part of Her Majesty's dominions; we, your petitioners, respectfully press upon the attention of your honourable House this our earnest appeal in behalf of the assistant-surgeons of Her Majesty's navy, trusting, through the wise intervention of your honourable House, to secure for the future for every ship's company in the public service the best medical assistance that our country's institutions can afford.

And your petitioners will ever pray, &c.

ON THE SALE OF POISONS.

[A Bill for the Restriction of the Sale of Poisons, to which the above petition refers, is now in preparation, and will be shortly introduced by the Government.]

The Petition of the President, Vice-President, Council, and Members of the Provincial Medical and Surgical Association, presented by Sir ROBERT HARRY INGLIS,

Humbly sheweth,

That your petitioners are an association of nearly 2000 physicians and surgeons, residing principally in the English provinces, having for their chief object the advancement of the science of medicine.

That it has come to the knowledge of your petitioners that great evils and much loss of life result from the indiscriminate sale of arsenic and other poisons.

That your petitioners have appointed a committee of their members for the express purpose of inquiring into these serious evils, and they have been indefatigable in their labours to investigate this matter.

That the result of their inquiry, which they are anxious to communicate to your honourable House, shows that many lives are sacrificed yearly from the want of due precaution in the sale of arsenic and other poisons; and your petitioners are of opinion that the whole subject requires the serious consideration of the Legislature.

But as the evils resulting from the indiscriminate sale of arsenic are the most pressing, your petitioners humbly pray that a legislative enactment may speedily pass your honourable House, by which it shall be provided—

First. That the sale of arsenic by retail should be restricted to chemists and druggists and apothecaries.

Second. Arsenic should only be sold to male adults, known to the vendor, or to their written order.

Third. The vendor should enter the sale in a book, with the date, and the object for which it was required, to which the applicant and a witness, one or the other being known to the vendor, should sign their names, unless a written order is brought in a handwriting known to the vendor, which order should be pasted in a book.

And your petitioners will ever pray, &c.

CHARLES HASTINGS, M.D. President.

PETITION OF A CANADIAN JURY FOR THE NON-REMUNERATION OF MEDICAL WITNESSES AT INQUESTS.

To the Hon. the Legislative Council, and Legislative Assembly of Canada, in Parliament assembled—

We, the undersigned, foreman and jurymen of the inquest held this 19th January, 1890, on the body of Duncan McCallum,

beg leave most respectfully to petition—That inasmuch as some of the "Members of the Medical Faculty" refuse to give voluntary evidence before Coroners' juries,—and inasmuch as it is highly necessary for such jurymen to have such medical evidence, in order to arrive at a true and just verdict in such cases,—and inasmuch as the law now makes it incumbent on such jurymen to serve without pay,—we, your Petitioners, humbly ask of your honourable body to pass, at the next session of the Provincial Parliament, an Act to compel all and any Physician, under penalty, when subpoenaed by any Coroner, and when said jurymen shall deem it necessary to make a post-mortem examination, and to give in their evidence of the same.

(Signed)

George Lepper, foreman; O. S. Phelps, Hiram Parkes, George Woods, Peter Napier, John Sanderson, T. T. Abraham, Asa Phelps, John Copeland, J. E. Eaton, Thomas Bunting, James Harris, Hugh Murray, James Barr.

* * We agree with the editor of the *British American Journal* in thinking that the Canadian physicians should get up a counter-petition, asking permission of the Legislature to walk into the shops of all persons liable to serve on juries, and to help themselves to such articles of merchandize as they may happen to require.

PROJECTED UNION OF THE WESTMINSTER MEDICAL SOCIETY WITH THE MEDICAL SOCIETY OF LONDON.

At a special general meeting of the Fellows of the Westminster Medical Society, recently held, the following report of the Council was received and adopted:—

1. That in the union of the societies it be understood that the laws of each society shall be subsequently revised, and a new code of laws framed.

2. That the honorary Fellows of this Society be retained in the new one, and that the same privilege be extended to the past presidents of the Medical Society of London.

3. That the honorary fellows be admitted to all the privileges of ordinary fellows, but be not allowed to hold any office unless they be also on the list of subscribing fellows.

4. That the seniority of the fellows of the new Society be regulated by the date of their admission into their respective societies.

5. That, in future, none but duly qualified practitioners be eligible for election.

6. That the present treasures, librarians,

secretary for foreign correspondence, and trustees of the Medical Society of London, be retained in the new Society.

7. That all the other offices in both societies be considered vacant at the time of amalgamation, with the exception of the President of the Medical Society of London.

8. That the President of the Medical Society of London at the present time continue President of the new Society until the period of his office expires.

9. That two vice-presidents, ten councillors, and a secretary, be nominated from each Society respectively, immediately on the amalgamation taking place, to be the corresponding officers of the new Society.

It was further reported that premises situated in George Street, Hanover Square, were well adapted for the purpose of the Society.

KING'S COLLEGE—ANNUAL MEETING OF PROPRIETORS.

THE annual meeting of the proprietors of this College was held on Friday last. The secretary read the report of the state of the College during the past year. During the last Lent term 159 students matriculated in the medical department, and also 37 occasional students. The Council lamented the limited accommodation afforded by the King's College Hospital both to the students in the medical department and also to the number of patients. This difficulty had been taken into consideration, and it had been determined to set on foot a fund for the erection of a new hospital. For this purpose, some benevolent person, signing himself as "A Friend to the Hospital," had sent a sum of £2000, and the donation was subsequently increased by the same individual to £5000, on condition that the Council voted a like sum. The Council have deemed it prudent to comply with the request, and altogether about £25,000, out of the £50,000 required for the new building, had been subscribed. The receipts of the year had been—in the department of applied sciences, £2,190. 11s. 10d.; general literature, £3881. 18s. 6d.; hospital fees, £1706. 5s.; medical department, £2540. 1s. 9d., making for hospital and medical fees a total of £5846. 6s. 9d.; military department, £638. 8s.; school, £8063. 1s. 6d.; theological department, £1913. 9s. These with other receipts gave a total of £28,666. 18s. 9d., whilst the expenditure in all these departments and under other heads amounted only to £24,998. 17s. 2d. This report was received, adopted, and ordered to be printed. Hald Risk Allah, who has been for some time studying medicine in this country, was elected an associate of this College. On the motion of Sir R. H. Inglis the

meeting adjourned to the large hall of the College, where His Grace the Archbishop of Canterbury distributed the prizes to those gentlemen who had distinguished themselves in the study of medicine in its various branches, and divinity.

ANNUAL REPORT OF THE NATIONAL VACCINE ESTABLISHMENT.

THE report from this establishment for the year 1850 has just appeared. The commissioners state that during the past year 172,944 charges of the vaccine matter have been distributed, and 9,089 children have been vaccinated by the surgeons appointed in the London districts, the board having likewise received returns of 114,190 cases vaccinated with lymph supplied from the establishment. Regret, nevertheless, is expressed that vaccination is not more universally resorted to, with which neglect the frightful amount of small-pox still existing in the United Kingdom is inevitably connected. In the metropolis alone, the total mortality from this pestilence amounted in eight years to 7,039, and was mainly dependent, as the commissioners believe, upon the neglect of vaccination: in support of which their report for 1817 is quoted, where it is stated that from the year of its foundation (1809) 34,369 persons had been vaccinated within the bills of mortality, of whom only four had the small-pox.

ALLEGED REAPPEARANCE OF THE CHOLERA IN IRELAND.

A CORRESPONDENT of the *Times* states that the malignant cholera has made its appearance in Castlecomer, in the county of Kilkenny, and in Bagenalstown, in the adjoining county of Carlow. In the former locality there have been five cases, three of which proved fatal, one recovered, and one still under treatment. In the latter there have been six cases, two of which resulted in death, the remainder being under treatment.

ASTLEY COOPER PRIZE.

THE Third Triennial Prize of Three Hundred Pounds has been awarded by the Physicians and Surgeons of Guy's Hospital, to Mr. T. Wharton Jones, of Conduit Street, for his "Essay on Inflammation."

THE NEW PATENT LINT.

WE have been requested to express an opinion respecting the new article which has already had a large sale under the name of Patent Lint. The advantages which it possesses over the common lint are, evenness of texture,—softness and smoothness,—that it can be equally torn, or spread with ointment in either direction,—its spongy character, and greater lightness. These are undoubtedly circum-

stances which render it well fitted for surgical use, and, as we are informed by those who have had an opportunity of trying it, these qualities have not been overrated by the patentees. We understand that it has met with the high approval of the Army Medical Board. Another recommendation to the practitioner is, that it is announced to be cheaper than the inferior kind of lint which has been long used in surgical practice. For other particulars we must refer our readers to our advertising columns.

THE UNIVERSITY OF LONDON.

THE first public conference of degrees by this University was held on Wednesday last in the Hall of King's College. The Earl of Burlington, Chancellor of the University, occupied the chair. A number of degrees were conferred, and it was announced that during the past year 25 gentlemen had passed the first examination for the degree of Bachelor of Medicine, while 8 had obtained the degree of Doctor of Medicine. The proceedings appeared to give great satisfaction to those present.

CANTHARIDAL COLLODION.

DR. LISCH, of St. Petersburg, has combined collodion with cantharidine. The combination he states to be equally efficacious, and more convenient in application than the common blister plaster. The solution is laid on with a hair pencil. It is formed by acting on four hundred parts of coarsely-powdered cantharides with four hundred parts of sulphuric ether and ninety parts of acetic ether, then dissolving two parts of gun cotton in fifty-six parts of this ethereal mixture. Or it may be formed in a more expensive method by using pure cantharidine, one and a half part of the latter with two parts of gun cotton dissolved in forty-five parts of sulphuric, and fifteen of acetic ether. Although more expensive in preparation than common plaster, M. Lisch states that it is more economical in use, three parts of the cantharidized collodion being equal to fifteen of ordinary plaster.—*Journal de Chimie Médicale*, Mars 1850. X

OBITUARY.

M. LE DOCTEUR CAPURON.

WE regret to have to announce this week the death of M. CAPURON, a man who had deservedly attained a high European reputation as an obstetric practitioner, and a most successful teacher of midwifery. Singular almost to eccentricity, he had the reputation of being addicted to miserly habits. It is said that his dwelling was for the long period of forty years one small lodging, which would not have satisfied

the wants of an average French student. But it now appears that while he lived in a most frugal and economical manner, he dispensed secretly the greater part of the money which he acquired by his practice and lectures, in acts of charity and benevolence. With ample means to live in a sumptuous style, he subjected himself to privations of every kind, for the relief of the destitute. It is twenty-five years since we attended his lectures in the Rue de l'Ecole de Médecine, when he was in the zenith of his reputation as a popular teacher. He had that easy off-hand style of address which is a peculiar feature of French professors, and which conveys the impression to Englishmen that their lectures are delivered without any previous thought or preparation for the subject. The benches of the theatre were uniformly crowded with pupils. M. Capuron did not contribute much to medical literature. He wrote a treatise on Practical Midwifery, which went through more than one edition; and he also published a valuable work on Medical Jurisprudence in reference to questions in midwifery. Although this is now considerably behind the present state of science, it is nevertheless full of practical suggestions for the guidance of obstetric witnesses; and it shows great acumen and a comprehensive judgment in the writer.

M. Capuron has died at a very advanced age. He has bequeathed to the Academy of Medicine the sum of one thousand francs (£40) per annum, to be distributed as an annual prize on some medical subject to be selected by the Academy. *Transit bene-faciendo!*

PROFESSOR KOCK.

We have also to announce the death of Professor Kock, of Erlangen, an eminent writer on botany.

HENRY SULLIVAN, ESQ.

At Toronto, on Wednesday, the 13th February, Henry Sullivan, M.R.C.S.L., Professor of Practical Anatomy in the University of Toronto.

SAMUEL M'MORRIS, ESQ.

On the 29th ult., at his residence, 12, Upper Fitzroy Street, Fitzroy Square, Samuel M'Morris, Esq., surgeon, late of the H.E.I.C.S., in the 88th year of his age.

Selections from Journals.

ON THE EMPLOYMENT OF ERGOTINE IN EXTERNAL AND INTERNAL HÆMORRHAGES.

BY M. J. BONJEAN, PHARMACIEN, CHAMBERY.

ERGOTINE when applied to wounds has the property, M. Bonjean states, of facilitating their cicatrization and moderating inflam-

mation of the wounded tissues. Under its influence union takes place by the first intention, and cicatrization occurs without further assistance.

In certain cases ergotine may perform all the offices of the ligature. M. Bonjean enumerates the following circumstances attendant on a capital operation in which its employment is indicated:—

1. When, in order to arrest a hæmorrhage, it would be necessary to disturb the lips of a wound in which cicatrization is commencing.

2. When the patient manifests a tendency to gangrene of the cut surfaces.

3. When the source of the hæmorrhage is from vessels embedded in the inflamed and swollen tissues.

4. When the blood flows from many small arteries of which the orifices cannot be perceived.

5. When hæmorrhage occurs from the sloughing of an eschar, as in gun-shot wounds, &c.

In these difficulties the application of ergotine is as often efficacious as the use of pressure is ineffectual. The application of ergotine supersedes ligature of the arteries, and effects cicatrization without interfering with the permeability of the artery.

The mode of employing ergotine is to dissolve it in five or six times its weight of water, for ordinary wounds; and in three or four parts, or even in a concentrated form, for more serious hæmorrhages. A portion of tow or lint is to be moistened with the fluid, and applied with gentle pressure to the surface previously wiped. When the hæmorrhage does not return on the pressure being removed, another pledget moistened with the solution is to be laid over the former, and the limb bandaged as usual. Perfect rest is to be observed.

Internal administration.—Ergot of rye has been successfully employed—

1. As an excitant of uterine contractions.
 2. As a stimulant to the muscular system in general.
 3. In hæmorrhages and certain fluxes.
 4. In congestion of the uterus.
 5. As a stimulant to the nervous system.
- The latter poisonous effect of ergot of rye is due, according to M. Bonjean, entirely to its fixed oil. The preceding properties are due to the *ergoline* alone.

Simple extract, or ethereal tincture of ergot, both contain a portion of its poisonous principle. Pure ergotine is in the form of a solid extract of a deep brown colour. In thin laminae it presents a blood-red colour. It has the odour of roast meat. Its taste is bitter. It is perfectly soluble in water, and this solution yields neither oil nor resin when heated with ether.—*Gazette Médicale.*

BOOKS & PERIODICALS RECEIVED DURING THE WEEK.

- Theory and Practice of Midwifery. By Dr. Churchill.
- The Aspects and Prospects of the Water Cure or Hydropathic System. By the Rev. J. C. Bodwell, A.M.
- The Quarterly Medical Recorder. Feb. to May.
- The Journal of Health and Disease. April.
- London Journal of Medicine. May.
- Pharmaceutical Journal. May.
- The Dublin Quarterly Journal of Medical Science. May.
- Edinburgh Monthly Journal of Medical Science. May.
- The American Journal and Library of Dental Science. Baltimore: October 1849.
- The British American Journal. April.
- The Philadelphia Medical Examiner. December 1849; January and February 1850.
- Boston Medical and Surgical Journal. April.
- Comptes Rendus. Nos. 15 and 16, 15 and 23 Avril.
- Le Presse Médicale. 28 Avril: Bruxelles.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, April 27.

BIRTHS.	DEATHS.
Males.... 739	Males.... 391
Females.. 770	Females.. 413
1499	803

CAUSES OF DEATH.

ALL CAUSES.....	803
SPECIFIED CAUSES.....	796
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	190
<i>Acute Diseases, viz.:</i>	
1. Dropsy, Cancer, &c.....	39
2. Brain, Spinal Marrow, Nerves, and Senses.....	100
4. Heart and Bloodvessels.....	31
5. Lungs and organs of Respiration.....	112
6. Stomach, Liver, &c.....	55
7. Diseases of the Kidneys, &c.....	13
8. Childbirth, Diseases of Uterus, &c.....	14
9. Rheumatism, Diseases of Bones, Joints, &c.....	12
10. Skin.....	2
11. Old Age.....	28
12. Sudden Deaths.....	28
13. Violence, Privation, Cold, &c.....	28

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	7	Convulsions.....	23
Measles.....	17	Bronchitis.....	46
Scarlatina.....	31	Pneumonia.....	49
Whooping-cough.....	85	Phthisis.....	110
Diarrhoea.....	11	Lungs.....	3
Cholera.....	1	Teething.....	11
Typhus.....	25	Stomach.....	4
Dropsy.....	14	Liver.....	13
Hydrocephalus.....	19	Childbirth.....	9
Apoplexy.....	23	Uterus.....	3
Paralysis.....	31		

REMARKS.—The total number of deaths was 105 below the average mortality of the seventeenth week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer	29.86
Thermometer.....	56.5
Self-registering do.	Max. 60 Min. 33
* From 12 observations daily. † Sun.	

RAIN, in inches, .05.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 3° below the mean of the month.

NOTICES TO CORRESPONDENTS.

The space necessarily devoted to the Medical Intelligence in the present number has prevented us from carrying out our intention of publishing Dr. Routh's reports. They will, however, be resumed at an early opportunity. For the same reason we have been compelled to postpone the insertion of various other communications which are ready for publication.

A Subscriber.—It is beyond our power to compel gentlemen to furnish papers which they have promised, if their practice or the state of their health should prevent them from completing them. We can only publish what is sent to us. The author of the papers referred to has no doubt a good reason for withdrawing them; and the complaint of our correspondent should be directed to him, and not to ourselves.

The Graduates of the University of London.—Undoubtedly these are legal M.D.'s, as much so as those of Oxford and Cambridge. The omission in the leading article of our last number (page 723) was unintentional.

A Member of the Royal College of Physicians.—We have it on the best authority that although there is nothing to prevent a Licentiate from calling himself a "Member," those who belong to the Royal College of Physicians are strictly Fellows, Licentiates, or Extra-Licentiates.

The King's College Hospital report has come to hand.

M.R.C.S.—Answers to the questions will be found in the Resolutions of the College published in the present No. (p. 782). It is clearly intended, as we have all along stated, that all who were members of the College prior to the granting of the Charter in 1843 will be admitted to the Fellowship without examination (under certain restrictions; as they shall become members of twenty years' standing.

M.D.—The letter shall appear next week.

Royal Infirmary for Children.—The paper has reached us.

The Liverpool Society's Report and the letter of Mr. R. H. A. Hunter next week.

Notice.—We have to request that all ADVERTISEMENTS may be addressed directly to Messrs. LONGMAN AND CO. Paternoster Row, and marked on the outside "ADVERTISEMENT." Great delay in the insertion has arisen from their having been addressed to the Editor of the Journal.

Lectures.

THE

LUMLEIAN LECTURES FOR 1850.

Delivered at the Royal College of Physicians.

By R. B. Todd, M.D. F.R.S.

ON THE PATHOLOGY AND TREATMENT OF
DELIRIUM AND COMA.

LECTURE II.

Gouty delirium—Delirium e potu, or delirium tremens—Delirium from the habitual use of opium—Toxic delirium, from the direct influence of poisons introduced into the system—Delirium in the exanthemata—Clinical history of coma—Epileptic coma—Abercrombie's simple or congestive apoplexy—Cases—Renal epileptic coma—Coma after scarlet fever, dropsy, and after acute dropsy—Slight attacks of epileptic coma—Paralytic strokes—Their connection with diseased kidney and bladder—Hysterical coma—Mesmeric coma—Case of spontaneous mesmeric coma—Mr. Dunn's case—Concussion of the brain, or traumatic coma—Coma from compression of the brain—Apoplexy—Can coma be caused by an increase of subarachnoid fluid?—Rheumatic coma—Gouty coma—Coma accompanying typhus and erysipelas, and the exanthemata—Coma from anemia—Coma from poisons—Recapitulation.

I CONCLUDED my last lecture with a description of that remarkable form of delirium which frequently accompanies rheumatic fever, and which is so apt to make its appearance simultaneously with some of those severe internal inflammations—carditis, or pneumonia, or pleurisy—which so often complicate that malady.

It will be necessary for me, by and bye, to consider the question, whether this remarkable and most interesting form of delirium is dependent immediately upon the cardiac or pneumonic inflammation, or whether it is merely a part of the general constitutional disturbance. I shall, however, here allude to an important point which favours the latter solution of this question—namely, that in cases of general gout, which resembles rheumatic fever in so many points, a delirium of precisely the same kind as that of rheumatic fever occurs, running the same course, and presenting the same features in its clinical history.

XLV.—1171. May 10, 1850.

A man who has had one or more attacks of gout in his great toe or in his instep, becomes affected with the same disease in all his joints,—knees, wrists, fingers, and toes. Towards or at the end of the first week he becomes delirious, without any internal inflammation, and without any cessation of the articular affection, and the delirium runs a course of some days, the patient emerging from it in safety, or dying exhausted and comatose, no trace of any inflammatory process being discoverable within the head, nor in the heart. This is one way in which gout may be said to affect the brain; and, therefore, I would distinguish it as the gouty delirium,—a feature in the clinical history of general cases of gout which, like all the other forms of delirium, the practitioner should be prepared to meet, and to deal with on fixed principles, grounded upon the most reasonable views of its pathology. And I may add, that the delirium may occur in cases where the gout is not general, but limited to one or two joints; but it more frequently occurs when the disease affects several joints.

Delirium tremens.—I have reserved for the last the reference which I wish to make to a form of delirium with which physicians are better acquainted than any other form, as being of much more frequent occurrence.

This is the delirium of drunkards—the delirium *e potu*—the delirium tremens.

I suppose there is no man who indulges largely and constantly in his potation who does not sooner or later fall into this state of delirium.

The progress of such a man may be thus described:—He drinks freely at and after dinner: in the morning, in consequence of the deranged state of his digestive organs, caused by the previous night's debauch, he feels low, languid, and out of sorts, and he is induced to have recourse to the use of stimulants,—wine or spirits, or beer; and so, by degrees, he becomes habituated to taking largely of stimulants, without being aware how much he really takes. He now becomes dyspeptic, flatulent, thirsty: he loses his appetite for food, but craves for stimulants, which supply, in a great measure, the place of ordinary food. Like Boniface, he eats his ale, he drinks his ale, and (when he can) he sleeps upon his ale; but, unhappily, he does not find it so easy to sleep now as he used; he is a long time before he can get to sleep; he is nervous, fidgetty, and restless, and a peculiar tremor is observed to accompany nearly all his voluntary movements, especially those actions which are purely voluntary, and are unaided by reflex actions. Thus, his hands tremble more or less: he cannot write

steadily: if you ask him to hold out a heavy book, or other object, you will find he cannot do so without more or less of tremor: he speaks tremulously; and, in extreme cases, the patients exhibit a marked degree of nervousness and anxiety on almost all occasions.

The deranged digestion, and the want of complete sleep, soon produce the most destructive influence upon the nutrition of the body, and especially upon that of the brain. Memory and the power of thought begin to fail; the patient loses his control over his thoughts; he is apt to wander: illusions take possession of his mind; subjective phenomena of vision or hearing are continually occurring. One who was himself a victim to this dreadful vice thus describes his experience of this stage of the progress of the drunkard:—"Hideous faces (he says) appeared on the walls, and on the ceiling, and on the floors; foul things crept along the bed-clothes, and glaring eyes peered into mine. I was at one time surrounded by millions of monstrous spiders, who crawled slowly over every limb; whilst beaded drops of perspiration would start to my brow, and my limbs would shiver until the bed rattled again. Strange lights would dance before my eyes, and then suddenly the very blackness of darkness would appal me by its dense gloom."*

At length the stomach becomes irritable, and rejects everything, or the supplies are cut off, both of solids and liquids, or the patient falls ill of some other disorder, or meets with an accident which subjects him to an antiphlogistic treatment. Now is the time when the delirium fully develops itself; the patient often becomes furious and unmanageable, and sometimes, in the paroxysm of delirium, destroys himself by jumping out of a window, or in some other way. The delirium, if not violent, is of that kind which is called *buty*; the patient picks the bed-clothes, or catches at imaginary objects floating or flying in the air before and around him.

As this delirium is clearly due to the habitual use of alcoholic stimulants, patients are apt to have several attacks of it, in one of which, sooner or later, they perish. Unless the habit is broken, the delirium will surely recur. Death is caused by exhaustion,—by epileptic paroxysms, which are very apt to come on after a long course of habitual drinking,—or by coma.

If the patient die in a first or second attack, the brain and its membranes will exhibit no indication whatever of disease; but, if he has had several attacks, there will

be signs of considerable alteration in the nutrition of the brain and its membranes. These changes are very similar to those which are found after frequent and repeated attacks of epilepsy. They consist of the following:—More or less of thickening and opacity of the arachnoid; enlargement of the Pacchionian glands; shrinking of the convolutions of the brain, and enlargement of the integral sulci.

The tendency, in general, of these cases is to recovery; but, after repeated attacks, the danger to life is greatly increased, because of the deranged state of cerebral and general nutrition.

And it is important to remark, that, as in most of the other forms of delirium to which I have referred, a low state of the system,—the loss of blood,—powers enfeebled by a too rigid or too long continued antiphlogistic treatment,—are highly favourable to the production and the persistence of this delirium.

This form of delirium is highly interesting, because it is clearly due to the introduction of alcohol into the blood, which tends to poison the brain, and seriously to impair its nutrition. It may, therefore, be regarded as typical of a class of delirious cases, arising from the introduction of a poison into the system, and which may be designated as cases of *toxic delirium*.

The form of delirium which I have just described is very closely imitated by the habitual use of opium; the same tremulousness,—the same impairment of the powers of thought and memory,—the horrors,—are all met with, as the result of the long-continued ingestion of this drug.

When alcohol is taken into the system in large quantity at once, it produces, in many persons, a violent state of delirium, which does not cease until the greatest part of the alcohol has been eliminated.

The inhalation of chloroform, of ether, and of other substances of this kind, will produce a kind of delirium when the inhalation reaches a certain point, but which speedily passes into coma when the inhalation is carried beyond that point.

Indian hemp, henbane or hop, belladonna, conium, and, indeed, the whole class of narcotic drugs, are capable of producing, especially in some persons, delirium of this kind.

The poisons of the exanthemata, too, produce delirium; that form of delirium which often develops itself in the premonitory fever of scarlatina, measles, small-pox, is of this kind, and will often disappear as soon as the characteristic skin affection becomes fully developed; or, in some severe cases, will continue throughout all the stages of the disease, until the poison has been fully eliminated from the

* The Autobiography of J. B. Gough, quoted in Dr. Carpenter's Prize Essay on Alcoholic Liquors.

system; or, again, in others, it will show itself only in the more advanced stages of the malady, when some check has been given.

I have thus enumerated, and rapidly glanced at, the principal points in the clinical history of the various forms of delirium which the practitioner may meet with. I have described—

1st. The epileptic delirium, and the choreic delirium.

2dly. The renal epileptic delirium.

3dly. The hysterical delirium and that of over-worked men.

4thly. The puerperal delirium.

5thly. The anæmic delirium.

6thly. The traumatic delirium.

7thly. The delirium of typhus.

8thly. The delirium of erysipelas.

9thly. The rheumatic and gouty delirium.

Lastly. The toxic delirium, or that which is distinctly due to the direct introduction into the circulation of a poisonous material, of which the delirium of drunkards, or delirium tremens, is typical.

And I have been careful to enumerate them, and to designate them according to some special feature; because it is only by a careful examination of all the states which are favourable to delirium, that we can obtain all the data which will guide us to a safe generalisation respecting the pathology of this remarkable affection.

We shall, however, be in a better position to examine this question when we have collected such details as I can respecting the clinical history of coma.

And as we have seen that delirium occurs in a great variety of circumstances, and under conditions which, to a superficial observation, might appear to be essentially different, so we find coma developed under as great a variety of conditions, and (what is highly deserving our attention) which are in close analogy with those which give rise to delirium.

In speaking of coma it must be understood that I use that term as exhibiting various degrees of the same state: from that profound insensibility in which no other actions take place in the body but those which are purely physical, in which all sense and volition are suspended, to a state of hebetude and lethargy, in which the sensibilities are rendered obtuse, and the motor powers correspondingly sluggish.

Now we have, as I said before, coma occurring under circumstances in close analogy with those under which delirium occurs; and I may at once state, as simplifying what I have to relate respecting the clinical history of coma, that we have it occurring in epileptic states, or what

may be called *epileptic coma*. 2dly. We have it in hysteria—*hysterical coma*. 3dly. We have it under circumstances which have exposed the system to some severe shock, as from great injuries—*traumatic coma*. 4thly, and here the analogy with delirium fails; we have coma arising from *compression* of the brain, as from an injury to the skull with depression of bone; or hæmorrhage within the cranium, from the effusion of blood on or into the substance of the brain, or from fluid in large quantity poured out into the cavities of the brain. 5thly. Coma will occur—and now the analogy returns—in rheumatic fever, in gout, in severe visceral inflammations, either after or independently of delirium. 6thly. We have it after great losses of blood, either after or independently of delirium, and in states of anæmia, without loss of blood; and lastly, we have the *toxic coma*, arising the direct ingestion of a poison—as of alcohol or opium.

Epileptic coma.—It will be unnecessary for me to dwell at any great length upon the clinical history of the epileptic coma. Like the epileptic delirium, it may occur before or after, or before and after, a convulsive fit, or it may occur without any convulsive fit, and it may be preceded or followed, or both preceded and followed, by delirium. A man may fall into the comatose state suddenly, without previous warning, and remain in it a longer or shorter time, and come out of it without having suffered any apparent mischief.

The most perfect example of this kind of coma is afforded by what Esquirol calls the *epileptic vertigo*, the *petit mal*, the epileptic paroxysm without convulsions—a form of epilepsy which is often highly destructive to the mental powers, especially when the attacks succeed each other at short intervals.

There are many instances in which men have had attacks of this kind of coma once in their lives, without any recurrence; and, the attack having occurred shortly after a meal, has been attributed to indigestion, and perhaps not without cause.

It is seldom that such an attack will take place wholly without convulsions, although they may escape the notice of bystanders. At the very commencement of the attack there will be a short convulsion of the muscles of the larynx, and perhaps also those of mastication and of the eyeballs; and it is this convulsion which determines the congestion of blood in the bloodvessels of the brain, which is sometimes found after attacks of this kind, and to which some attribute the phenomena both comatose and convulsive. In such attacks the course of events is this: a

change takes place in the brain, caused either by mental emotion, or by some physical influence; an abnormal development of the nervous force is produced—consciousness is instantly destroyed—the patient remains in an unchanged attitude, or he falls—and simultaneously with, or instantly after, the destruction of consciousness, the convulsive affection of the laryngeal muscles, and perhaps also of the muscles of mastication, takes place, and immediately subsides; the coma remaining for a longer or shorter time, and sometimes killing the patient in a very few minutes.

The condition called by Dr. Abercrombie *congestive apoplexy*, may, as it seems to me, with more propriety be referred to this state of *epileptic coma*. I shall quote one of the cases related by Dr. Abercrombie, for the purpose of comparing it with two similar cases which occurred in my own experience.

A gentleman, aged 24, had been observed for some days to be dull and drowsy, and he frequently complained of his head. Not having appeared at his usual time one morning, his friends went into his room, and found him lying across his bed, half-dressed, in a state of perfect apoplexy. The attack was evidently recent, and it was supposed that he had been seized while he had been stooping over his basin in washing. His face was rather livid, his breathing stertorous, his pulse slow, and of good strength. All the usual remedies were employed with assiduity, but through the day there was no change in his symptoms. In the course of the night he recovered considerably, so as to know those about him, but, in a short time after, he relapsed into coma, and died early on the following day, little more than twenty-four hours after the attack."

"*Inspection*.—There was a slight turgescence of the vessels on the surface of the brain; no other appearance of disease could be detected after the most careful examination. All the other viscera were in a healthy state."

The first case of this kind to which I shall refer from my own experience is one which excited much interest at the time it happened, in consequence of the great respect in which the individual who was the subject of it was generally held.

He was a tall, stout, well-made man,—had just completed his 55th year. He was well known in the scientific world, and not more admired for his high intellectual qualities than for his kind and amiable disposition. Of all the men I ever knew, there was none of whom it might be more truly said, that he was

Integer vitæ scelerisque purus.

I enjoyed the high privilege of having been

on terms of the closest intimacy with him for many years, and was well acquainted with the state of his health and constitution, which I had no reason to believe were otherwise than sound.

He was of an ardent but extremely cheerful temperament; he was anxious and easily excited, but possessed great sweetness of temper. At the time of the fatal occurrence he held the office of Foreign Secretary to the Royal Society; a subject was under discussion at this time about which he was excited rather more than his usual evenness of temper generally permitted, or than the intrinsic importance of the matter in question justified, a circumstance which led me to apprehend that he was out of health, although I could not detect any other satisfactory indications of it. At one of the Thursday meetings of the Council, which was very fully attended, he addressed the members present briefly on the subject of discussion, but in such a manner as led those who heard him to think that he felt very warmly upon it. Shortly after he had resumed his seat, he was heard to make a gurgling noise in his throat, and his eyes were turned convulsively upwards. He was caught just in time to prevent him from falling, and was laid on the floor in a state of coma, foaming at the mouth, and breathing with some degree of stertor. There were several medical men present, and as he did not seem readily to show signs of recovery, it was judged expedient to bleed him. The blood flowed readily, but as the pulse very soon showed signs of failing, the arm was soon tied up. He never rallied from this state of coma, and died in less than a quarter of an hour after the attack.

I was present at the *post-mortem* inspection, which took place on the following day. There was not an unsound viscus in the whole body; the brain was essentially healthy, but exhibited at parts, especially where the small branches of the middle cerebral artery penetrate the fissure of Sylvius, a considerable degree of congestion. Some doubts might have existed as to the perfectly healthy state of the kidneys; but it may be certainly affirmed respecting them, that if they were at all in a morbid condition it was a very early and slight degree of chronic nephritis.

This was a case, then, which Abercrombie would have called *simple apoplexy*. It seems to me a more reasonable view to suppose it to have been one of epilepsy or epileptic coma; and although the patient had never previously shown any symptom of such a disease, yet his excitable temperament, and the strong emotions under which he laboured, and which he used great efforts to control, were quite sufficient to develop

such an attack, more especially if there had been any incipient disease of the kidney.

In a second case, where the attack was equally sudden but the event not so rapid, the distinct existence of renal disease denoted the truly epileptic nature of the attack. A respectable tradesman in the Strand had been some time suffering considerable anxiety in consequence of the depressed state of trade, and had experienced for a few days a feeling of giddiness in the head, to which, however, he paid no attention. On the evening of the 11th March, 1848, as he was walking from one room to another, he fell as if shot,—not insensible, but paralysed on the right side; he was like one who had experienced a sudden shock,—cold, depressed, with a feeble heart and pulse. He was almost instantly attended by my friend, Mr. Duncan, of Henrietta Street, Covent Garden, who is a most judicious practitioner. This was at six o'clock p.m. At that time Mr. Duncan found it impossible to do more than take a small quantity of blood by cupping from the back of the neck. At eight o'clock he became completely insensible, with contracted pupils, and breathing heavily. He was now bled from the arm to 4 or 5 oz. without any effect; and he continued in a state of profound coma, perfectly insensible, without any great stertor, until nine o'clock the following night, when he died: just twenty-seven hours after the attack.

The symptoms were such as led me to expect a clot of blood in the corpus striatum of the left side; but a most careful examination of the brain disclosed no diseased condition of that organ beyond a little shrinking. There was a great deal of subarachnoid fluid, and one or two drachms of fluid in the ventricles. The kidneys were contracted, and distinctly in the state of so-called chronic nephritis.

There is a distinct connexion between chronic disease of the kidneys and this form of coma, just as between the same form of renal disease and the epileptic delirium. The coma connected with renal disease will come on under three forms:—1. Suddenly, becoming profound and passing to a fatal termination; 2. Gradually, and also passing into the profound state; and 3rdly, in paroxysms presenting an exact resemblance to the epileptic, either of coma simply or of coma with convulsion, or of either or both accompanied with delirium. And the state of the urinary secretion varies; always, however, presenting a decided departure from the normal state, being either wholly suppressed or greatly diminished in quantity, or even increased in quantity, with low specific gravity. The more serious head symptoms will occur in those cases where the deficiency of the urine or of its solid

contents is most marked. In nearly all cases the urine contains albumen.

The cases of ischuria renalis, as it has been called, long recognised by practitioners, and graphically described by the late Sir Henry Hallford, must be referred to this variety of coma.

Coma in dropsy after scarlet fever.—The coma which comes on in dropsy after scarlet fever is of this kind:—A child has gone through a mild attack of scarlet fever, dropsy develops itself universally after two or three days, the urine is very deficient in quantity, and, after a day or two, the child falls into profound coma and dies. On examining the brain, no morbid change is discernible, excepting that the organ looks pale, in common with the rest of the body; but the kidneys exhibit the characteristic signs of the acute disease which is so common when the scarlet fever poison has been received in large doses, or imperfectly eliminated by the skin.

Coma in acute dropsy.—So, also, after acute dropsy, coma will come on, and either kill the patient or greatly endanger life, and the same appearances exactly as in the scarlet fever dropsy, will present themselves; or, as is, I believe, a very frequent occurrence, an acute affection of the kidneys will supervene on a previously existing chronic affection, and kill the patient by coma in a few hours. Many a case of rapid death is, I have no doubt, due to this form of coma, the renal affection having been undetected during life, and perhaps overlooked after death. A man may have had chronic renal disease creeping on insidiously, and so long as a sufficient quantity of water has been eliminated through the kidneys, no symptom sufficiently serious to lead him to seek medical aid would occur. But presently he would be exposed to cold, or his digestive organs would become much deranged, the kidneys fail in their action, "the pitcher is broken at the fountain," and fatal coma ensues.

Comatose affections of this kind are sometimes extremely slight, and even momentary; but, however slight, they should be carefully investigated, and especially with reference to the powers of excreting the urine. Mild forms of what are called *paralytic strokes* are sudden attacks of epileptic coma, which may or may not be accompanied with paralysis, which, when it does occur, is frequently quite transient, just as the paralysis after epilepsy is. A gentleman, aged fifty-two or fifty-three, was under my care the greatest part of last summer for chronic disease of the kidneys. He appeared to be going on well, when one night I was hastily summoned to him, the messenger stating that he had had a para-

lytic stroke. I found my patient sitting up in bed, in a state of great alarm, and he informed me that just after he had got into bed he was seized with a sudden loss of consciousness, which lasted scarcely a minute, and that he felt a loss of power on the left side of his face, and there still remained a sluggishness of motion on that side, which lasted two or three days. Three months afterwards, this gentleman, having continued in his usual health during that period, while staying at the house of a friend in the country, was seized with another similar attack, from which he recovered for the moment, but speedily relapsed into coma, and died in a few hours. I had no opportunity of examining the brain, but the existence of renal disease admitted of no doubt.

I have some reason to think that obstacles to the excretion of the urine at the bladder may occasion comatose affections of a similar kind. Not only "may the pitcher be broken at the fountain, but the wheel may be broken at the cistern." Last autumn I saw a gentleman of 60 years of age, an eminent solicitor in Lincoln's Inn, who, while talking with a client, received a sudden stroke, creating a momentary loss of consciousness, and a sense of numbness on one side of the face and body. I saw him immediately afterwards, and found him greatly alarmed; but, on making him keep the horizontal posture, and take some ammonia, he completely recovered, and went home to his residence a little way from town, where I saw him two days afterwards, along with Dr. Cobb, of the London Hospital. After most careful examination, we could discover no indication of renal disease, nor any cause for his attack besides over-work in his profession. It appears that afterwards he had a repetition of the attacks, although he had given up work, and gone into the country for change of air; and it was now found out that he experienced some difficulty in micturition, owing to an enlarged prostate gland. This was relieved by mechanical means, and since then there has been no recurrence of the attacks.

In all these cases of epileptic coma, the appearance of the brain and of its membranes after death affords no indication of the previous existence of any active morbid process during life.

If the immediate exciting cause of the comatose state be of recent origin, the brain will exhibit no morbid change; if few or no attacks have occurred before the fatal one, there will be no morbid change; but if there have been several attacks previously, as in ordinary epilepsy, there will be the same changes as we see in that disease—a shrinking of the convolutions of

the brain, some opacity of the arachnoid, perhaps some adhesions between its layers, and more or less of fluid in the subarachnoid space, that fluid being the more abundant in proportion as the convolutions of the brain are more shrunk; the shrunk brain, with a large quantity of surrounding subarachnoid fluid, constituting the condition which succeeds the so-called serous apoplexy of authors. Most, if not all, of such cases (excepting where the serum has been poured into the ventricles) being probably epileptic coma, either connected with ordinary epilepsy, or with some defective action of the kidney.

Hysterical coma.—The hysterical coma is of very frequent occurrence, and sometimes resembles the epileptic so nearly, that it is very difficult to distinguish the one from the other. One character of it, however, must be especially borne in mind—that it rarely, if ever, is perfect. Even in the worst of cases, some spark of sensibility remains, which may be lighted up by loud speaking, or shaking, or the dash of cold water, or pinching, and a power of performing voluntary acts, or maintaining certain attitudes, such as walking, sitting, &c. Again, while a patient may fall into this coma suddenly, he may come out of it with equal rapidity, and without any bad effect—a fact which sufficiently shows that in this state there can be no such change in the condition of the brain as may not right itself almost instantaneously.

[To be continued.]

AMPUTATIONS.

DURING the winter of 1847-48, Dr. J. Randolph performed the flap operation in a number of cases upon the leg and thigh. The termination varied with the circumstances; but was certainly not below the average of amputations of the lower extremity. Dr. Randolph's preference was pronounced for the flap operation, both above and below the knee. He adopted the plan of Liston, of delaying the dressing of the stump for an hour after removing the limb, to ascertain whether reaction would produce hæmorrhage from vessels untied. The irritation produced, however, by opening the stump even after that short time, when coagulation has begun to cause adhesions, is a reason why, unless hæmorrhage *does* occur, the flap should not be disturbed on dressing. There is no doubt that this plan lessens the danger of extremely disadvantageous secondary hæmorrhage afterwards.—*Notes of Hospital Cases, by Dr. Hartshorne, in American Journal of Med. Sciences, Jan. 1850.*

Original Communications.

THE PSYCHOLOGY OF NERVOUS,
SPASMODIC, AND CONVULSIVE
DISEASES.

BY WILLIAM SMITH,

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Hospitals for the Insane; formerly Resident
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subsequently in the General Hospital at Lin-
coln.

Licuit, semperque licebit
Parcere personis, dicere de vitiis. HORACE.

It has occurred to me, during my late researches into the pathology of the brain and nervous system, that the class of disorders usually termed nervous, spasmodic, and convulsive diseases, has heretofore been studied as though such diseases had no real connection with the brain or sentient faculty; as though in fact they belonged to the spinal marrow, or the sympathetic or ganglionic system, and that the nervous matter within the cranium was not implicated in, or in any way cognizant of, these morbid changes of function or structure. I beg most respectfully, but decidedly, to enter my protest against such doctrines, as subversive of a comprehensive view of disease, and tending to limit the sphere of our usefulness, by narrowing the circle of our remedial agents. I look upon the brain, spinal marrow, and ganglionic system, as one and indivisible—*tria juncta in uno*; and consider that the well-meant but mistaken views of physiologists, in arbitrarily dividing the nervous system into separate compartments, each having an action independent of the rest, exhibits a lamentable shortsightedness of the power and wisdom of that Being who created man in his own image.

Feuchtersleben, in his excellent "Medical Psychology" (Sydenham Society translation), a work worthy the perusal of every true lover of science, remarks:—"In the study of medicine, the psychical element is almost obscured by the abundance and prominence of the somatic portion, and its claims to attention are more imperatively felt, when we come to the study of psychiatrics proper—the doctrine of the diseases of the mind,—to the treatment of which few young physicians turn their atten-

tion; and one of the principal objects of these lectures is to encourage and qualify them for this branch of their profession. It is owing to this preponderance of the somatic, that such an important fundamental doctrine of medical study has been far less attended to than its importance demands. According to Hartmann, who was indisputably the most learned of medical psychologists, and whose memory it will ever be the pride of our University to cherish, the reason of this neglect is the fact that philosophers by profession are no physicians, and on the other hand that physicians are seldom enough of philosophers to handle this subject successfully. Everything that can serve to effect this union of characters for medical purposes is a part of our object. The boundaries of our doctrine are, on the one side, philosophy,—in the stricter meaning of the word, metaphysics and ethics, which we only take for granted, but whose domain we dare not encroach upon any further than to mark its confines; and on the other side, practical medicine, for one branch of which it is our intention to prepare you.

* * * * *

"No one has more occasion than the physician to recognise the power of mind and the perishable nature of matter; and if he do not attain to this recognition, the fault is not in the science, but in himself, in not having thoroughly studied it; for here we may say, as Bacon did of philosophy, 'when superficially studied it excites doubt; when thoroughly explored it dispels it.'" I am strongly impressed with the belief that the influence of mind over matter has been greatly overlooked in the treatment of what are usually termed the nervous disorders of females; and hence this has been a rich source of profit to the whole tribe of charlatans, both within as well as without the pale of legitimate medicine. So long as the public pay their medical adviser in ordinary as they pay their butcher and baker—for the physic they swallow—so long will a strong temptation be offered to the cupidity and love of acquisitiveness naturally implanted in mankind. In what class of disorders have more apparent miracles been wrought (by Prince Hohenlohe and his disciples, titled professional or vulgar), than in the nervous disorders of females? If you hear of any extraordinary cure by magnetism,

macmerism, or any other Bedlam craft or imposture, ending in ism, be well sure, as Byron wrote, there was a lady in the case! Does not all this prove the demonstration the truth of my argument, that to deal with these disorders successfully and scientifically, you must begin at the fountain-head—the mind? I say nothing against prescribing necessary medicine, regulating the secretions, paying attention to the ingesta and egesta, the hours, the exercise, the occupation, mental or physical; for these are absolutely necessary; but what if the *fons et origo mali* lie in some suppressed or concealed passion of the mind—a moral cankerworm undermining the beautiful fabric—the body united to it? May we not say, in the words of the immortal bard—the physiologist and pathologist of nature's forming—

"Cure her of that.
Canst thou not minister to a mind diseas'd;
Pluck from the memory a rooted sorrow;
Raze out the written troubles of the brain;
And with some sweet oblivious antidote,
Cleanse the stuff'd bosom of that perilous stuff,
Which weighs upon the heart?"

Venerly we can do them great service by pointing out to them the absolute necessity of paying attention to the organic laws of Nature, every breach of whose ordinances carries along with it its own punishment, present or to come.

Can any person of an ordinarily reflective mind be surprised at the amount of nervous disorders now prevalent in this country, if he take into consideration the busy, restless, enterprising times in which we live—the constant wear and tear of mind—the unceasing struggles for wealth, luxury, or distinction, which daily and hourly agitate all ranks and orders of society?

An able writer and accomplished physician, Dr. W. F. Browne, of Dumfries, has remarked:—"It is probable that much of that unsoundness of mind which cannot justly be attributed to the grand revolutions for good or evil in which mankind is involved, nor to any of those events which disturb the surface of society, may be found to originate in that profound and universal activity which characterises the intelligence of the present generation. It is very obvious that the multiplied means, and the rapidity with which new thoughts are transmitted and adapted to the comprehension of the ignorant as well as the educated; that the incessant

repetition of new and powerful impressions; the deep and intense interest which now attaches to every question; the daily appeals to passions and sympathies: the craving for novelties, discoveries, and for rapidity of moral progress,—must all tend, directly and inevitably, to establish a condition allied to morbid excitement, exhausting to the system, open to the incursion of disease, and incapable of resisting the effects of disappointment and misfortune.

"It is not a witticism, but a grave and pregnant truth, to affirm that an individual, actuated by the cares and pleasures and pursuits of the current century, 'lives more of life,' passes through more numerous, more vivid, and more perilous phases of intellectual existence in one year, than his immediate ancestor did throughout his whole career. While it does not always happen that the symptoms of mental alienation bear any relation or resemblance to its cause,—that fear should produce fear,—yet it has been observed that the feverish activity, the unreasonable, if not Utopian, ambition, and the constant tension of the powers described, is very generally followed by depression, despondency, and despair. In the group under consideration, there are youths who have passed years amid all the rapid alternations and eager hopes of railway speculation, in the construction of aerial machines, in the propagandism of a new political faith; there are women in the prime of life who now, in all probability, experience the results of that fervour of devotion, but fickleness of principle, which seeks gratification in powerful, even although painful impressions. The desire to acquire fortune or fame rapidly, even suddenly, is but a modification of the same spirit which inspires the desire to communicate knowledge rapidly by a royal road, by a tax and strain upon the energies, or by saving them all exertion and application. When directed towards the young it fosters that precocity which is naturally engendered by the tendencies of society, by the modes of life, by the very recreations of the play-ground, and favours the development of disease. It stimulates in the cradle; it anticipates nature; it imposes the burden of maturity upon the feebleness of infancy, and kindles those tendencies which so often terminate in

scrofulous or nervous disease. Statisticians believe that the age at which insanity appears is now earlier than it was fifty years ago; and although other causes must contribute to such a result, there is abundant evidence to prove that prematurity of intellect, whether natural or superinduced, tends to early decay. Several illustrations of these observations have occurred during the present year. One, himself a teacher, trained under a system which enforced continuous application, enjoined an hour's relaxation and eleven of study; or mental attention of some kind, and openly professed as an object to condense the greatest possible amount of knowledge in the shortest possible time, is now exhausted, dejected, dispirited, aged, and decrepit in mind, but deluded into the belief that he has accomplished all things. A gentle girl incessantly craves a Testament in the original language, which she acquired in conjunction with an amount of biblical and varied learning more calculated to exercise the memory than to strengthen the understanding. In a third, the muscular system seems to have been forgotten, and the fine proportions of an athlete are associated with the accomplishments of a dilettante. It would be rash to affirm that education evoked his ruin. The capacities, the temperament, and the hereditary tendencies of the patients, may have been such as to endanger the stability of reason; but to the injudicious application, the amount, or the selection of the means of training, may be referred the nature and the period of the catastrophe."

Now, I would ask whether these remarks, so admirably portraying the character and pursuits of the present age, are not equally applicable to the class of diseases now under consideration? That nervous, excitable, and mobile state of the nervous system, which is prevalent in, and invariably accompanies these nervous, spasmodic, and convulsive disorders, is the first link in the chain of morbid phenomena, of which insanity may be considered the termination, the *ultima rerum*. Again, look at the absurd and unphysiological character of the routine of fashionable female education in the present day: mind is cultivated at the expense of bodily vigour—French, Italian, perhaps German, music, and the fascinating mysteries of crochet-work, fancy wool, *et hoc genus*

omne, take the place of our mother-tongue, and those homely but domestic accomplishments (known to our grandmothers, but now consigned to oblivion) which once rendered an Englishman's fireside the envy of foreigners: to use the prophetic language of Goldsmith—

"Those often desire that milk'd but little room;
Those healthful sports that graced the peaceful
scene;
Lived in each look, and brighten'd all the
green;
These far departing, seek a kinder shore,
And rural mirth and manners are no more."

But if we consult the pages of Holy Writ, or medical history, we shall find that these changes in the character and pursuits of a nation have been continually occurring from the beginning of time: What says Feuchtersleben on this score?—"In the lovely and salubrious climate of Greece, under circumstances which do not concur a second time, there arose, in the purest sense of the expression, a golden age, not only for the development of the arts and sciences, but likewise for humanity. That gradual transition from an uncorrupted state of nature to a state of free, great, and universal education, rendered possible the existence of a moment when, without over-refinement, and without coarseness, the highest intellectual culture was in one nation simultaneously combined with original simplicity and purity—a moment which stands unparalleled in the history of the world,—a combination which, as it cannot be attained by design, gave birth to works such as no subsequent age has ever been able to equal. But it was only a moment; as the purely beautiful style in art is followed by the voluptuous, so was culture succeeded by refinement, and simplicity by luxury; and, when the Romans, a people naturally alien from the muses, contrary to their innate disposition, imitated the refinement of the conquered Greeks, and, as is usual with all imitations, exaggerated what they copied, it degenerated into that effeminate luxury which was not the least among the causes that led to the downfall of the ancient world.

"It is susceptible of proof that, with the increase of refinement, the occurrence of nervous and mental disorders increased in a proportion which has been maintained to the present day. So long as Greek heroism continued to echo the natural simplicity of the Ho-

meric age, so long as the unsophisticated manners of the old Romans subsisted, there was no occasion to notice the occurrence of such diseases. With the advance of civilisation in Hellas they appeared now and then, though in truth but rarely. But so soon as civilisation degenerated into voluptuousness they increased in number and intensity; and when at Rome, unbridled debauchery and insane luxury surpassed even the pomp of Athens, from which the graces had not wholly departed, then did those psychical anomalies increase, and such, in particular, as are frequently mentioned in Galen's work on Diseases of the Mind. The monomania for suicide of the Milesian maidens, and the feverish psychical excitement of the inhabitants of Abdera, after witnessing the performance of the Andromache of Euripides, are adduced as being in some degree instances of an epidemic psychopathy."

If any one doubts the rapid spread of mental disorders in the present day, I refer him to the urgent demand for new lunatic hospitals, or an immense enlargement of the existing institutions in every county of England and Wales. Look at Middlesex, with the leviathan establishment of Hanwell for 1000 patients, literally overflowing; so much so that a new hospital is now in course of erection at Colney Hatch, capable of accommodating 1000 more; making thereby conveniences for the reception of 2000 pauper lunatics in one county only. Look at Lancaster, with nearly 7000, and two new hospitals building for 700 more. Northampton, Nottingham, and Lincoln, are full; and furthermore, according to my experience, the neuroses, or nervous, spasmodic, and convulsive disorders, are on the increase *pari passu*. But there is another significant fact tending strongly to corroborate my view of the rapid spread of these disorders. Look at the quantity of new works on the subject of nervous disorders of females. I speak not of Sir B. Brodie's excellent little work "On Nervous Affections," which in the small compass of 88 pages contains more pure grain than many a bulky tome of wordy chaff; or Dr. Marshall Hall's work, and many others which have now been before the medical public for several years,—but of treatises quite recently sent forth from the press. Physicians and surgeons

will naturally write on those diseases most frequently presented to their observation. For my own part, my official connection with the Lincoln Lunatic Asylum, and subsequently with the General Hospital at Lincoln, has given me ample opportunities of studying the interesting phenomena of mental and nervous disorders; my natural inclination and peculiar turn of mind (for every man has a hobby of some sort, though few have the candour to plead guilty to the impeachment) have also prompted me to pursue the subject still further. I agree with that eminent authority, Sir B. Brodie, that it is in private practice, and especially among the higher, at all events more wealthy classes of society, that you meet with the most exquisite forms of these disorders. For upwards of three years I have had under my observation a lady, who has served a term of, I believe, more than ten years of abject slavery under that despotic fiend, hysteria: various and Protean have been the disguises assumed by the malady; now presenting the characters almost of mania, anon those of catalepsy, and again one is almost apprehensive of acute inflammation of the lungs, or some other important organ in the animal economy. I always avoid depletion in these cases, and I have seen scores of them. Some of the older practitioners, whose early career probably commenced among diseases of a more sthenic character than those we are now called upon to treat, occasionally pursue the strictly antiphlogistic regimen, to the great detriment of these patients. The young lady just alluded to was some years ago treated upon these principles: leeches were repeatedly applied to the spine, she was profusely salivated, kept in the house, &c. with what effect? She has, though under thirty, scarcely a tooth in her head; the nervous system is thoroughly shattered; the mind, possibly never a very strong or intellectual one, is a prey at times to the most extraordinary delusions; there is mostly profuse menorrhagia at the catamenial periods. Am I hobby-horsically given, or merely uttering the dictates of common sense, in asserting that such a case may possibly terminate within the precincts of an institution for the insane? Now this case is fraught with interest in another point of view, as tending

to prove the truth of hereditary predisposition to disease—a subject not sufficiently investigated by the bulk of the medical profession. The mother of this lady, whom I also attended professionally, was a worthy character, but highly eccentric—possibly her numerous trials through life had made her so; the father was highly eccentric, and of habitually intemperate habits. From such turbid sources could an offspring, having the *mens sana in corpore sano*, be reasonably expected? All the sons have proved intemperate, and the daughters have that excitable, mobile state of the nervous system which always borders upon disease; the train of combustible elements has been laid up in the nervous system,—cerebral, spinal, and ganglionic,—and the blood,—the lighted match—a strong predisposing cause, whether exciting or depressing, moral or physical, only is required, and then the grand explosion takes place!

Sir Benjamin Brodie, in the graphic little work before alluded to, remarks: "The female who was the subject of the third case had laboured under a paralytic affection of the lower limbs (paraplegia), which Dr. Seymour believed, with good reason, to be connected with, and the consequence of, hysteria. A practitioner with whom he consulted, however, thought it advisable to have recourse to repeated blood-letting, and other methods of depletion. The result was the formation of extensive sloughs of the nates, and of the soft parts covering the ankles. The patient was now admitted into the hospital in a state of great exhaustion, and soon afterwards died. The brain and spinal cord were most carefully examined, in the presence of many of you who are now present, but it could not be discovered that they differed in the smallest degree from their natural condition; nor were there any signs of disease in the thoracic or abdominal viscera.

"In adducing these facts, however, I by no means intend to assert that the organisation of the nervous system, in a person who is liable to aggravated hysterical affections, differs in no respect from that of another. The intimate structure of the brain, spinal cord, and nerves, is on too minute a scale for our senses to be able to perceive and comprehend it; and of course there may

be differences in the organization of organs which our senses are incapable of detecting also. There is, it is true, nothing in the history of hysteria to justify the opinion that it is connected with any morbid growth, or morbid change of structure, such as we find to exist in what are usually termed organic diseases; but it is easy to suppose, without reference to organic disease, that the construction of the nervous system, at the period when growth is concluded, may not be the same in all individuals, and that an imperfect development of it may lay the foundation of all the aggravated hysterical affections. It seems to me that this hypothesis affords a reasonable explanation of the phenomena which those strange diseases present to our observation, and that it is not easy to explain them in any other manner. This being admitted, the connection of hysteria with the habits of early life, while growth is going on, becomes no mystery. We can understand, also, wherefore it is that the disposition is often, to a certain degree, hereditary—that it prevails in particular families, and that once having been established in the system, it is never totally eradicated. Nor is this opinion in any way contradicted by the circumstance of hysterical symptoms alternating with longer or shorter intervals of perfect health. It is the same with many other nervous diseases, some of which are much more formidable than these. The lunatic has intervals in which his delusions vanish. A tumor pressing on the brain may occasion epilepsy: the cause exists always, but after the patient has had one fit weeks or months may elapse before he has another. In like manner a patient may have a nervous system so constructed as to render her liable to attacks of hysteria: while she is strong and healthy in other respects no hysterical symptoms arise; but if she be weakened by an attack of fever, by loss of blood, by too great exertion of mind and body, or depressed by anxiety, grief, or disappointment, the disease is rendered manifest, and it assumes one form or another, accordingly as accident directs its influence to one or another part of the system."

The same eminent authority, whose practice among the nobility and higher orders of society must have afforded

him ample opportunities of proving the efficacy of judicious treatment, observes:—"In those in whom the liability to hysterical diseases exists, as I have already had occasion to observe, the symptoms of hysteria are not always present, and much may be done by art towards rendering their occurrence less frequent, and their character less severe than would be the case otherwise. These symptoms are especially called into existence whenever, from any cause, the bodily powers are reduced below the ordinary standard; and it is reasonable to suppose that an opposite effect will be produced by whatever tends to elevate these powers, and maintain the general health. The whole class of tonic remedies, especially steel, quinine, sulphate of zinc, and ammonia, may, under certain circumstances, be employed with advantage. So, also, it is of importance that the patient should live on a generous diet; that she should take exercise out of doors; that she should live in the pure air of the country rather than in that of a crowded city; and that her mind should be agreeably occupied, without being exhausted by great exertions. Nothing tends more to aggravate the disposition to hysteria than the tedium and ennui of a life without occupation; when the mind is, as it were, thrown back upon itself, brooding over imaginary misfortunes, and creating for itself objects of anxiety. . . .

"In some cases of hysterical neuralgia the patient is supposed to derive benefit from the abstraction of blood by leeches, or cupping, or even by venesection. Indeed, I have no doubt that the loss of blood is occasionally followed by a real alleviation of pain. But the relief is never otherwise than temporary; and wherever I have known this kind of treatment to be frequently resorted to, the ultimate result has been, certainly not only not beneficial, but absolutely injurious to the patient. In fact, we may lay it down as a general rule, that whatever lessens the physical powers tends to prolong the duration of hysterical diseases of all kinds; and nothing produces this effect in a more marked manner than repeated blood-letting. Those who are subjected to this treatment, according to my experience, become, almost invariably, invalids for life; and I have no doubt

that not unfrequently their lives are materially shortened by it."

In a future communication I hope to detail some cases corroborating these views.

Belper, South Derbyshire,
March 1850.

[To be continued.]

A CASE OF ECSTASY. BY M. MAUGIN.

R— H—, aged nineteen years, of a good constitution, lymphatic temperament, with black hair and brown eyes, having good general health, menstruation regular, moderate in religious observances, of a gay and thoughtless character, fell asleep one evening about seven o'clock her mother, who was at the time absent from home, was surprised on her return to find her daughter asleep, and endeavoured to wake her, but without avail. Being alarmed, she summoned M. Maugin, who found her lying on her back in a quiet and calm sleep, interrupted every now and then by deep sighs; the pulse was regular, soft, and slow; the limbs supple and moveable. The eyelids being opened, remained so; the pupils were insensible to light, and no means of excitation addressed to either of the senses succeeded in rousing her. She was insensible even to cutting and pricking and pinching the surface of the body.

This state lasted from the Sunday evening until Tuesday morning at ten o'clock, when suddenly she rose from her bed, fell on her knees by its side, and opening her eyes, which she raised towards heaven, joined her hands, and began a scene impossible to be described, and worthy the pen of a romance writer. All the catechisms, prayers, sermons, pious books that she had ever known or read, were repeated with the fervency almost of inspiration. The state of physical insensibility remained. She continued thirteen hours in the same condition, and thus occupied. On waking she expressed surprise at the concourse of people that surrounded her, and complained only of debility.

When questioned she stated that she had dreamt that an angel had conducted her to heaven. She gave a most rapturous account of the happiness she had experienced in her dream.

This state of ecstasy returned four times, twice at intervals of fourteen days, and once of eight days, and lasted on one occasion twenty-six hours. Her general health has not suffered. M. Maugin regards the case as one of a peculiar form of insanity.

—*Gazette Médicale*, 1850.

X

FATAL CASE OF POISONING BY
TARTAR EMETIC.

BY JAMES EDWARD POLLOCK, M.D.

Licentiate of the Royal College of Physicians,
(Medical Resident in Rome from 1842 to 1849)
&c.

I DESIRE to place on record a case of poisoning by tartar emetic which occurred in Rome, under my notice, in the early part of last year. The history of the case is not so complete as could be wished, as the political circumstances of that city at the time of its occurrence were so peculiar as to forbid the possibility of a post-mortem examination. The quantity of the poison actually taken, which is the point of peculiar interest to the medical jurist, was so accurately ascertained, owing to the singularity of the moral circumstances of the case, that I believe it will be a useful addition to the limited number of observations of the occurrence of death from this mineral.

In the month of January, 1849, Mr. C—, a patient of mine, had obtained from England a bottle of tartar emetic in powder for the purpose of preparing an ointment for application to the chest, as we did not conceive that the foreign preparation was equally good for that purpose. The bottle contained two ounces, and was labelled, as usual, in English. It lay on his dressing-table, to which his courier, Antonio, had free access. This bottle was missing for some weeks, and all search for it proved unavailing till after the fatal occurrence. On the morning of Feb. 21, at 7 A.M., I was called in haste to see Antonio, who, it was stated, had poisoned himself. The following was the history of the case. At 1 A.M. he had retired to rest, having accompanied his master home from a ball half an hour previously. He was a robust, healthy Italian, aged about 30; and I ascertained that, when in waiting with the other servants at the house where the entertainment was given, he had been quite sober, and was in his usual health and in high spirits. Shortly after he retired to his room, a maid-servant in an adjoining apartment heard him vomiting violently, and, on knocking at his door, he opened it, and stated that he had taken "a tea-spoonful of

tartar emetic as a medicine, not feeling himself well." He then went downstairs to the porter, and vomited all the way; returned to his room, still retching violently, drank freely of cold water, and lay down on his bed. An Italian physician, who was then sent for, told me that he saw him at 3 A.M. (two hours after the poison was taken); that he stated that he had taken a tea-spoonful of tartar emetic as a remedy for slight derangement of stomach, &c., and that he had had no other medicine. He was very restless and anxious, although sensible in manner; still vomited, or rather retched violently, at short intervals, and complained of heat and constriction in the throat, and pain in the epigastrium. His respiration was frequent; skin perspiring freely; bowels naturally moved twice; pulse rapid and small.

Conceiving that the danger was now over, as the poison must have been nearly all removed by the frequent vomiting, his medical attendant left him, ordering $\mathfrak{ss}$. of the decoction of cinchona to be taken every second hour. His medicine unfortunately did not reach him till 6 A.M.: meanwhile he was constantly attended by his master; his restlessness became extreme; respiration rapid, then slower; the difficulty of swallowing became greater, and he sank into an insensible state about 6 A.M. (five hours after the poison was taken).

The case presented the following hopeless features when I saw him at 7 A.M.:—He lay on the bed insensible, motionless; the eyes open, the pupils closely contracted; the respiration slow, laboured, no stertor; the mouth spasmodically closed; the surface warm throughout, and dry; pulse 130, very small, and, even while I remained, becoming much more indistinct; the impulse of the heart scarcely perceptible; the power of swallowing had ceased; there was no vomiting; no dejections from the bowels further than those above mentioned. With the syringe and œsophagus-tube I washed out the stomach repeatedly with a weak solution of tannin, without, however, any hope of benefit. He died tranquilly, and without convulsions, at 11 A.M., exactly ten hours from the time of taking the poison.

On searching minutely through the

room, I could not discover any phial or vessel which contained any remains of medicine; but the missing bottle of tartar emetic was found in his box, as full as when it arrived from England, and weighing exactly two ounces. The authorities immediately removed the body and all the matters in the room, and any further insight into the nature of the case was denied us; nor did any investigation that I could hear of take place. But the peculiar state of Rome at that period (which was then agitated by the Republican experiment), and the habitual neglect of proper medico-legal investigations in the Papal state at the best of times, will sufficiently account for the negligence of the authorities.

The following circumstances, which I personally ascertained, seem to decide the fact of poisoning having occurred from tartar emetic, as well as the *quantity taken*:—On inquiry at a chemist's shop who usually supplies foreigners with medicines, I discovered that some weeks previously the courier had come to the shop and stated to one of the assistants that he had spilled a small portion of a medicine of which his master had a bottle, and that he wished the chemist to replace it exactly, so that the accident might not be discovered. The assistant weighed out *one drachm* (English weight), which exactly replaced the quantity which had been removed from the bottle, and stated to us that he had a distinct memory of the transaction. We also learned that the unfortunate man had embezzled money to some amount belonging to his master, having left unpaid, for a long time, various bills for which he had received funds.

I conceive that we have here sufficient evidence that this was a case of poisoning by tartar emetic, and that *the amount taken did not exceed one drachm*. I would remark on the symptoms, that the rapid supervention of insensibility and great depression of the circulation indicates that the mineral acted directly on the nervous centre, and exerted that powerful effect on the action of the heart which we are accustomed to call its "sedative" effect when administered in large doses in the Italian method. The absence of diarrhoea, tenesmus, &c. shows that it had probably not passed for any distance into the intestines. I

cannot also help deeply regretting that a more direct chemical remedy had not been earlier administered. In such cases tannin (when it can be had, as in the present instance) is preferable to the infusions of any of the barks containing it, as invaluable time is lost in the preparation of the latter, and their administration in powder is neither so practicable nor so efficacious as that of the active principle itself. *Two hours* were lost by the chemist in the careful preparation of a decoction which arrived too late!

In a medico-legal point of view the case is interesting in several respects.

1. It is the only case on record in which death ensued in so short a time from *so small a dose*. In the only one which proved fatal of Orfila's five reported cases, that result occurred in four days from two scruples. In Beck's case (a child) fifteen grains were fatal "in a few weeks." Three drachms were fatal in a case in England (Traill); but the exact period of death is not recorded.

2. Taylor states that the quantity required to destroy life "will probably depend much on whether active vomiting or purging have been excited or not," as in such cases the poison will probably be removed; but here vomiting of a violent character occurred early, and continued for hours, and still we have the fatal issue apparently as a primary result of the poison on the brain and heart.

3. I am not aware that any case of *suicide* by this mineral is on record: in fact, it is not vulgarly known in any country to be a poison. After much thought over the above case, my own impression is, that the unhappy man did not intend to commit suicide at all, but merely proposed to himself to excite one of the known frequent symptoms of poisoning; that, when he had been discovered to be suffering, he would state that he had robbed his master and taken poison; and that then, having received an expected forgiveness accorded to him in commiseration, he looked forward to recovery as from a common emetic; and that thus it was a case of *poisoning by mistake*. But these speculations are concerning events hidden among the inscrutable things of eternity!

MEDICAL GAZETTE.

FRIDAY, MAY 10, 1850.

It is satisfactory to find that the Government have been at length induced to propose a bill for placing some legislative restriction on the free trade in poisons, which has hitherto had an unchecked course in this country. In answer to a question recently put to him in the House of Commons, SIR GEORGE GREY is reported to have said that the subject—

“was one of considerable importance, and the hon. member was right in saying the practice of taking away life by such means had become more frequent than formerly. At the same time, the detection of such crimes was extremely easy; and one advantage of the hon. member's motion was, that it gave opportunity for the expression of an opinion founded on experience, that the detection of murder by poison was so easy that few of them escaped. The subject, however, was under the consideration of the Government, and a bill had been prepared on the sale of poisons. If the hon. member had paid attention to the subject, he would know that great difficulty lay in the enumeration of the poisons to be included in the schedule; and he doubted if an inquiry, with the object of ascertaining, as the hon. member suggested, by an examination of chemists and medical men, what course ought to be taken, would not produce more harm than good, by enabling persons to have recourse to other poisons than those now used to destroy life. Under these circumstances, he hoped the hon. member would not press his motion.”

We believe that the plain and practical suggestions contained in the petition from the Provincial Association, and recently presented to the House of Commons* by SIR ROBERT INGLIS, have had great influence in accelerating

legislation on this subject. This petition refers chiefly to the sale of *arsenic*,—a substance which, by its great cheapness and deadly properties, is more frequently employed with criminal intention than any other poison. It is calculated that about from one-half to three-fourths of all deaths from poison are caused by this mineral: hence any prohibitory statute in reference to arsenic alone would, we believe, be attended with good effect. Other poisons, it is true, are open to the murderer, but there are properties possessed by arsenic to which we need not further allude, that render it peculiarly adapted to the purposes of secret assassination.

Although we agree with SIR GEORGE GREY that the detection of poison is easy, we cannot quite concur in the statement that few murders by poison escape detection. The Registration Act affords very great facilities for the erroneous or false record of deaths. The slovenly manner in which sudden and suspicious deaths are often inquired into at coroners' inquests affords another convenient screen to the act of murder; and the frequent exhumations of dead bodies after the lapse of many months, and even years, prove that neither a legal registration of the death, nor the verdict of a coroner's jury, can be regarded as affording sufficient security to the public. It is true that in such cases the poison has still been easily detected, and the crime brought home to the assassin; but this event has been the result of mere accident, such as a failure in other attempts to poison, or the voluntary confession of a criminal. Until we have a more correct system of registration, and a proper verification of the cause of death, society must be exposed to these secret acts of murder by poison, many of which, it is only fair to infer, from the results of past experience, still remain undetected. The

victim is in his grave, and the murderer is walking abroad with impunity. The coroner's inquest, as it is at present conducted, is, in reference to these cases, a most inefficient institution. There is a struggle to avoid medical evidence altogether; and if a medical man be called in, an attempt is sometimes made to procure an opinion from him even without an inspection of the body. These efforts are for the purpose of saving to the county rates one or two guineas in fees, as the case may be. Should an inspection be ordered, then there is a difficulty regarding an analysis. The medical practitioner, unused to such investigations, is of course most unwilling to involve himself in a serious amount of responsibility; and the two-guinea fee of the Act of Parliament, which is a bare remuneration for the post-mortem examination alone, must according to law cover all the expenses of a complex analysis, involving probably two or three days' intricate research in the hands of an experienced and competent person. It cannot be known to our Government that from such a system one of the following evils must commonly result:—1. The analysis is not made at all, and an opinion expressed without it; 2. It is made imperfectly, and hence an erroneous verdict is returned, injuring an accused person in the one case, or conferring impunity on a criminal in the other; or, 3. If the case involve some public notoriety, the medical practitioner surrenders his own fee, and procures a subscription from his neighbours, in order that a proper investigation may be made! This is a system which has, we believe, for a long period prevailed in and around this metropolis. The public justice of the country is served either by a sacrifice on the part of medical practitioners, or on the part of men who profess to undertake these scientific investigations. In the county

of Surrey, no fee exceeding two guineas is allowed by the magistrates through their coroners for any chemical investigation, however intricate, while it is a matter of notoriety that for this fee no proper investigation can be made by a professional man whose experience is such as to justify the entrusting of so responsible a duty to him. But there is another circumstance to which we feel it our duty to call public attention. The magistrates of this county make the payment of a fee for an analysis in a suspected case of poisoning to depend on the detection of poison, and on the committal of a suspected person on a charge of murder! The analyst is thereby told,—if he will only make out the existence of poison in the stomach of a deceased person, he will be paid for his scientific labour and research,—otherwise not! Let our readers consider the facts of the following case, and they will, we think, agree with us, that if we desire to repress the crime of poisoning, it will be as necessary to introduce some alteration in the mode of investigating such cases, as to place a prohibition on the sale of poisons.

The following case occurred in the district of Godalming, Surrey, in December 1846. Two children, in the family of a labouring man, died somewhat suddenly; and, as they were shortly before in good health, it was supposed that poison was the cause of death. A highly respectable medical practitioner in the neighbourhood was required by the coroner to make a post-mortem examination of the bodies, and an analysis of the contents of the stomachs. The former he undertook, but the latter office he declined. At the request of the coroner, this was remitted to a professor of chemistry at one of the metropolitan hospitals. No poison was detected in the bodies, and, as it turned out, there were no moral circumstances to excite suspicion against the parents. Hence the coroner's jury returned verdicts of death from "natural causes."

The coroner made an application to the magistrates for a special fee, as it

was stated the analysis had occupied considerable time, had caused much trouble and expense, and had not been undertaken under the Medical Witnesses' Act, but by his own especial request. After some delay, the following answer to his application was returned :—

"North Lambeth, April 12, 1847.

"Dear Sir,—According to your request, I read your letter of the 23d ult. to the Court of Quarter Sessions at Reigate on the 6th inst., and I am desired to inform you that the Court was of opinion that they had no power under the Act of Parliament, or otherwise, to order payment of the charge made by Mr. —, the chemist, for making the analysis in the case of the two Thorndales.

"You will perceive that the case quoted by Mr. — as a precedent for the allowance of these charges differs most materially from that which is under consideration, inasmuch as in the former case, *the accused having been brought to trial*, Mr. —'s charges were allowed him as a witness in the case, which of course could be done under the certificate of the committing magistrate; *but no such subsequent proceedings having taken place here, there is no mode of procuring payment.*

"I am, dear sir,

"Yours truly,

"RICHARD ONSLOW."

"To —, Esq."

This letter scarcely requires any comment. The medical practitioners of Surrey will learn from it, that with every desire to aid justice by procuring a full investigation of a case of suspected poisoning, they can expect to receive no support from the magistrates of their county; and those who take upon themselves the trouble and responsibility of making a chemical investigation in such cases, will derive this lesson,—the payment of their expenses will depend entirely on their making out the presence of poison, and so shaping their evidence as that "subsequent proceedings" may be taken against a suspected

person! Can any honest practitioner accept such a responsible duty upon such a contingency? We shall only remark that cases of poisoning in Surrey are rarely heard of. This may be from the actual infrequency of the crime; but it may also arise from the great difficulties thrown in the way of a careful and proper investigation of suspected cases.

We freely admit that a great step in advance will be made towards the suppression of a most detestable crime, if some reasonable restrictions be imposed on the sale of poison; but we cannot withhold our opinion, that until the verification of the causes of death be placed in the hands of some competent medical officer, appointed for the purpose, and the medical and scientific services required at inquests be properly remunerated, there will be no security against the secret administration of poison. In the case of the two criminals recently executed for murder at Cambridge, it was proved that the male prisoner had in his possession a sufficient quantity of arsenic to poison about 3000 persons! It was not procured by purchase, but most imprudently handed to him by his master in order that it might be destroyed. The packet found in the house of the prisoner was the residue of a large quantity which had been employed for the dressing of seed-corn. It had been lawfully procured, and for an innocent purpose; but by a species of accident which may again occur in agricultural districts, it passed into the hands of one who made it the instrument of a foul murder. Unless the sale of arsenic were prohibited altogether, a case like this could not be prevented by any Act of Parliament, however stringent. But for the acumen of an honest and intelligent country practitioner, the crime would have remained to this hour unknown and undetected.

Two deputations of medical practitioners had interviews with SIR GEORGE GREY on the 2d inst: the one represented the National Institute, the other the Members of the Provincial Medical and Surgical Association. The object of the first was to propose the incorporation of a new College of General Practitioners, and of the second to require a modification of the charter of the Royal College of Surgeons. We do not consider it necessary to enter into all the topics which were discussed at these interviews. In spite of what was stated by the speaker of the first deputation, we still hold our opinion that the majority of the profession, including "the 10,000 or 12,000 General Practitioners," are decidedly adverse to the incorporation of a new College. Even in the National Institute there are two parties,—one for, and the other against, this proposition; so that, with this division in their own body, and the almost universal opposition to the scheme on the part of the Provincial Association, it is not to be supposed that the minister will recommend to the Crown the creation of another College as a substitute for the Hall and the Colleges of Surgeons and Physicians. It is said that there is no intention on the part of the members of the new College to interfere with the present rights and privileges of the existing Colleges; but it must be obvious that the new and old institutions cannot coexist. Either the powers of the new College will be *nil*, or they will supersede those of the other two. We can perceive no *mezzo termine*, and we confess that the non-creation of a new body appears to us to be a smaller evil than the latter alternative. All the additional skill said to be required on the part of practitioners may surely be conferred without the aid of a new College; and we can perceive no ground

for the allegation that it is seriously intended by the College of Surgeons to depreciate or lower the status of the general practitioner. Such an attempt has not yet been indicated either by alterations in the curriculum, or by the nature of the examinations. We regard this plea, therefore, at present in the light of a sentimental grievance: it is at least a very weak argument in favour of the foundation of a new College. The public will naturally ask, how new and untried men can give better security for the examination and licensing of medical practitioners, than those Corporations to whose hands these powers are now entrusted. The charge of neglect in reference to medical education is certainly unfounded, as any medical teacher or student will testify; and unless this charge can be clearly established, the members of the Government will pause before they recommend to the Crown a new Incorporation.

Since writing the above we have received a Memorial of the Society of Apothecaries, addressed to Sir George Grey, and two other Memorials, the one from a deputation of Provincial Medical and Surgical Practitioners, and the other from the Macclesfield Medico-Ethical Association. We shall publish these documents next week.

UNION OF SEPARATED FLESH.

To add to the well-attested cases in which completely excised parts have reunited with the body, Dr. Hartshorne states that a coloured man, who had cut off the whole pulp of the end of one forefinger with a razor, placed it on again, and came under his care at the hospital. Finding the piece crooked, he pushed it, so that it fell off into a basin of water. It was refitted, however, and left untouched for five days. It was then found to be entirely reunited, leaving a mere line to indicate the junction.—*American Journal of Med. Sciences*, Jan. 1850.

Rebels.

A Few Suggestions on Consumption. By ROBERT HULL, M.D., Physician to the Norfolk and Norwich Hospital. 8vo. pp. 138. London: Churchill; Norwich: Stevenson and Matchett.

SYDENHAM advised horse exercise, as the *palmarius* remedy in consumption; protesting that "mercury in lues, and bark in agues, are not more effectual than the exercise mentioned, in curing a consumption." This quotation from Sydenham serves Dr. Hull with the text for his discourse, which is contained in a very short, but very full book,—a book replete with sound common sense, clear pathological views, and practical deductions—with, however, a trifling parade of learning.

Dr. Hull's remarks on the climates in which consumption is most prevalent, and those to which consumptive invalids are generally sent, deserve attentive consideration. The author dwells upon the point that consumption is a systematic malady, that

"Although, therefore, tubercles in the lungs are the anatomical character of consumption, this is only because the tubercular dyscrasy has concentrated its manifestations on the respiratory organs. There are other consumptions through the abdomen." (p. 3.)

Dr. Hull inveighs most strongly, throughout his work, against the employment of opiates to allay the cough of consumptive patients:—

"To me they have," observes the author, "during many years, appeared hurtful. Action is the order of the human microcosm, as well as of the universe. But the effect of opium is remora, stoppage, death." (p. 9.)

After speaking of its more direct effects, Dr. Hull remarks:—

"All the vessels effluent from the heart, all the returning veins and lymphatics, partake the lethean torpor, sluggishly conveying their various liquids. Is this a state proper for a consumptive, requiring nourishment for his wasted frame; blood for his cold extremities; absorption of tubercular deposits; expulsion of softened tubercles?"

The author, in forcible language, shows how *tendencies* to consumption are educed, and the disease brought into

activity, by improper management of infants, as regards nursing, dieting, and clothing.

Dr. Hull regards all remedies as of very inferior importance to active exercise in the open air, not only as warding off, but as removing early symptoms of the developing phthisis. We quote from the author's observations on a now fashionable remedy:—

"The same enthusiasm, that is now displayed in favour of cod-liver oil, hath been in turn displayed for every new remedy. If it, indeed, possessed those divine qualities, which Mr. Braithwaite reports, the grand specific hath been discovered, to prevent phthisis, to cure it: to give health, to lengthen life. But let the most credulous remember that, after all, its glories depend upon an *if*. 'If it be carried into the circulation.' And if, when there, it works away with the judicious zeal declared above." (p. 43.)

Again:—

"Nor are its effects on some phthisicals less various. Some it purges; of others it stops the diarrhoea. Has it not the power to stimulate the digestive organs as well as increase the products of digestion? For it makes fat disproportionately to its own quantity: some ounces consumed, some pounds added to the weight of the frame. Thus the assellous oil should be *tried*, for, if it cannot be tolerated—if it nauseates or pukes—it can readily be dropped. If it agrees with the stomach and bowels, it may be used, but not even then as a sole and mighty therapeutic. It must not induce a contempt of *air*, nor of exercise, nor of generous diet, solid and fluid. At present it is endangered by overpraise." (p. 127.)

In like manner, all therapeutic agents and plans of treatment are discussed by Dr. Hull, who, while he admits the importance of remedies addressed to the functions of digestion, and to the restoring or maintaining the powers of the constitution, lays his only stress upon out-door exercise, either on horseback, in carriage, or on foot. This principle guides every recommendation, and influences every line of what the author denominates as mere "suggestions"—but to which we should give the name of "facts and reasonings."

The few extracts which we have been able to adduce, very inadequately convey an idea of the peculiarities of the author's style, which is forcible and unique, and in many parts has a rich

vein of genuine humour. The matter, also, of this little treatise is deserving of study on the part of junior practitioners, to whom it will, we think, do good service, by warning them against too much "doctoring," in a disease which, when once distinctly developed, and when it has progressed to a certain point, has never yet yielded to the power of medicine.

Proceedings of Societies.

PATHOLOGICAL SOCIETY OF LONDON.

DR. LATHAM, PRESIDENT.

April 15, 1850.

MR. AVERY exhibited a specimen of *Extraordinary Displacement and Twisting of the Cæcum and Ascending Colon, producing obstruction of the bowels, in which an operation for artificial anus was performed.*

A man, æt. 55, out-patient at Charing-Cross Hospital, died nine days after almost complete obstruction of the bowels, and twenty-eight hours after the operation had been performed. He was seen by Mr. Erichsen, and Mr. B. Phillips, who agreed with Mr. Avery in thinking that the obstruction was below the descending colon, and that opening the gut in the lumbar region offered the best prospect of relief. This was twice delayed, in consequence of small portions of fecal matter coming away with the injections used; and when it was done, the patient was so extremely low that it was scarcely expected he would have survived the night, and it was at last done at his own request. The descending colon was easily exposed by a transverse incision, and found to be quite empty and flaccid. The peritoneum was opened, and a greatly distended intestine, which was considered to be the transverse colon, was securely attached by sutures to the anterior angle of the external wound, a free opening made into it, and vent given to an immense quantity of fetid gas and some fecal matter. The abdomen became soft, and a considerable quantity of gas and fecal matter continued to escape. The patient rallied a little in the night, but vomiting continued, and he died twenty-eight hours after the operation. On opening the abdomen, a very small quantity of clear yellow serum escaped. The surface of the peritoneum was everywhere (excepting im-

mediately around the wound) perfectly smooth and polished. Several parts of the intestines and subperitoneal tissues were, however, a good deal congested. The stomach was enormously distended, and nearly filled the whole of the hypochondriac and epigastric regions, forming a prominent and distinct swelling, which had been mistaken for the distended arch of the colon. The small intestines were much distended. On lifting up the great omentum, the arch of the colon was found completely empty and flaccid, as well as the descending colon and sigmoid flexure. The displacement affected the termination of the ileum, the cæcum, and the ascending colon, and the position they had assumed may be understood by following these parts backwards from the arch of the colon towards the small intestines. From the arch the ascending colon made its way obliquely downwards to the right sacro-iliac symphysis, where it passed under, and was firmly pressed upon and strangulated by the termination of the ileum and its stretched mesentery: thence the ascending colon made its way into the left lumbar region; afterwards it turned up towards the stomach, forming a loop, and then downwards and to the right side of the vertebral column, where it continued into the cæcum and ileum. The cæcum was turned upside down, the appendix vermiformis lying above and to its right, instead of below and to its left side; and the ileum, cæcum, and ascending colon, together formed a complete coil in the midst of the small intestines, the extreme point of which had been opened at the anterior angle of the wound in the left lumbar region. The coil was perfectly flaccid. Just at the part where the mesentery and ileum pressed so tightly on the colon, a gland in a calcareous state, as large and as hard as a marble, lay immediately under the strangulated bowel, and had no doubt considerable influence in producing the obstruction, as it was situated above the constriction that every effort to force the contents of the gut onwards tended to carry the gland into the opening. Close above the constriction the colon was much congested and discoloured, and the internal coats were extensively ulcerated, and perforation about to take place. A free opening existed in the bowels at the wound for the evacuation of its contents. Plastic matter had already been effused on the peritoneal surfaces in the neighbourhood of the wound, which agglutinated the parts softly together, but the inflammation was limited to an inch, or an inch and a half, around the opening in the bowel.

DR. QUAIN reported that he had ex-

mined the specimen of ruptured heart exhibited by Mr. Coulson. He found that both ventricles were covered by a layer of soft pale "fatty tissue," which had also extended over both auricles, but chiefly the right one, though to a less extent than over the ventricles. The muscular walls of the right ventricle were so much encroached on by fat that in some parts they were not thicker than a line. The internal surface presented some spots of fatty tissue amongst the fibres. The muscular tissue of the left ventricle was softer than natural; the right coronary artery was thickened, and greatly obstructed. Two ruptures, little more than a quarter of an inch apart, existed at the apex of the heart; they communicated with a small irregular cavity in the muscular substance, situated where the septum meets the walls of the ventricles: this cavity communicated with both ventricles, showing a double rupture communicating with these cavities. Hæmorrhagic spots existed in the fat tissue in the neighbourhood of the ruptures. With the microscope, at the seat of rupture extreme fatty degeneration was found to have occurred, as also in the septum, but to a less degree, in the walls of the ventricles, and right auricle. One specimen exhibited showed fatty particles occupying the substance of the fibre; a second, an entirely different condition—viz., the growth of fat cells on the fibres in those points where the encroachment of the fatty tissue on the whole of the ventricle had occurred.

The distinction between "fatty growth" on and about the fibres of the heart, and the "degeneration of the fibre itself into fatty matter," was well displayed in different portions of this heart.

Dr. WILLIAMS exhibited

A Malignant tumor, which was attached to the anterior part of the Upper Dorsal Vertebra.

A man, *æt.* 60, about three years before his death, found after a rough drive that he could not raise his body erect without severe pain through to the middle of the chest. He suffered afterwards from occasional acute lancinating pains, chiefly during cough, sneezing, &c. This was generally considered to be rheumatic, or neuralgic. Shampooing baths, which he tried at Brighton, severely aggravated the pains. During an attack of influenza, with the rest and treatment, the pains ceased, but returned on the journey home. Mr. Tatum, of Salisbury, now saw him, and detected a slight outward displacement of the third and fourth dorsal vertebra. Near this Dr. Williams found dulness, and remarkably loud tubular sound, two inches to the right, and one inch to the left of the

spine; and he inferred from these and other reasons that there was a tumor connected with the vertebra, of a malignant nature, the mother having died of cancer. He suffered from occasional severe attacks of bronchitis, with an unusual amount of congestion of the lungs. In one of these he died, about two and a half years after the diagnosis was formed.

The lungs were healthy, but much engorged at their posterior parts. Attached to the front of the spinal column was a tumor resembling a cerebellum: it had caused absorption of the bodies, and part of the transverse processes, of the third and fourth dorsal vertebra, and heads of attached ribs, and projected on either side of the column. No other disease was found, as far as the examination was made. The softest parts of the tumor in consistence scarcely equalled that of the brain, and yielded an opaque whitish fluid. Under the microscope, abundance of well-defined cells were seen, mostly round or oval, containing distinct nuclei, which in several instances were double. Some few cells were caudate.

This case illustrated the importance of studying the signs in the dorsal regions of the chest, as they present earlier and more constant indications of disease than those in the anterior regions. The tumor, by pushing aside the lung, had transmitted the sounds from the trachea at or close to its bifurcation. A similar sign was found to mark the presence of other tumors in this locality—viz., incipient aneurisms, enlarged glands, &c.

The case also afforded another example of the uncertain progress of malignant disease.

Dr. FULLER exhibited a

Large Encephaloid Mass,

from the abdomen of a girl *æt.* 9, who became an out-patient of Dr. Fuller at St. George's Hospital in February. She had enjoyed tolerable health till July. In a few weeks after this a tumor was perceived projecting from under the ribs on the left side downwards towards the pelvis. It increased very rapidly, and pressed upon the rectum and the neck of the bladder, thus producing much distress. When brought to the hospital the abdomen was enormously enlarged, the right side tympanitic, the left dull on percussion. Protruding from under the ribs on the left side, and causing them to bulge considerably, was a firm solid tumor which could be traced down the abdomen on the left side, dipping into the pelvis, its anterior margin being irregular. It was regarded to be an enlarged spleen. She was greatly emaciated, and her legs œdematous. She died March 30th.

The encephaloid tumor was seen occupying the whole of the left side of the abdomen. Superiorly it pressed against the diaphragm, and encroached considerably upon the thorax. Inferiorly it dipped into the pelvis between the rectum and the bladder. It was irregularly oblong, knobby on its surface, and larger at its superior than inferior extremity. It weighed four pounds nine ounces. Its cut surface was in most parts of a cream colour, firm and elastic to the touch, but in parts of a dark mottled appearance, and somewhat softer. The bladder was greatly distended, and was above the brim of the pelvis. The ureters were considerably dilated, also the pelvis of either kidney. The structure of the kidneys was much diminished by pressure. The other viscera healthy.

The tumor itself presented nothing of particular interest, inasmuch as tumors of a similar nature are often met with at a much earlier age. But the case afforded another example of the extreme uncertainty attending the diagnosis of abdominal tumors, and also showed that a peculiar condition of the blood, which Dr. Fuller had supposed peculiar to certain forms of disease of the spleen, may be seen in other disorders. The peculiarity consists in the presence of large numbers of colourless, granular, spheroidal globules, varying in size from that of a common blood corpuscle to twice or three times that size as shown by actual admeasurement. Whether these globules be merely the colourless corpuscles of the blood in an altered condition, or altogether of abnormal production, there can be no doubt that their presence is indicative of an unhealthy state of the blood. These globules Dr. Fuller had observed in every case of enlarged spleen, *unconnected* with ague, in which the blood was examined; and satisfied by repeated examination that they *do not exist* in the blood of persons having enlargement of the spleen as the result of ague, he had supposed them peculiar to that form of enlargement of the spleen which occurs independently of malarious influence. But as the same condition of blood was found in this case, it is obviously not peculiar to, or diagnostic of, the disease alluded to; and it becomes a question of considerable interest as to the conditions under which these globules make their appearance.

Mr. GRAY exhibited a specimen of

Fracture of the Base of the Skull,
in which the patient lived two months.

A man, *æt.* 53, was admitted into Saint George's Hospital, October 28th, under Mr. Cutler; insensible, with the mouth drawn to the left side: there was a scalp wound on the outer side of the right frontal

eminence exposing the bone: he fell down stairs while intoxicated, and was insensible when picked up: the accident occurred on the 27th inst.: he passed his urine and motions. On the 30th was more sensible, complained of pain in his head, and got out of bed to pass his motions, then became restless and incoherent; this continued until the 6th of November, when he was more sensible, and when roused answered collectedly; ptosis of the right eyelid was now observed, as the swelling of the lids, the result of extravasation, had subsided. He now began to improve; by the 23d the palsy of the face was scarcely perceptible. On December the 17th, the wound, though nearly healed, became dry. He was attacked with erysipelas, and died on the 27th.

Post-mortem examination.—A small portion of carious bone was exposed by the wound. The bone was very vascular some little distance round the carious portion, and to its outer side and beneath it there was a fracture, with slight depression of the internal table. Its commencement was connected with a transverse fracture about an inch and a half long; it was then traced along the lower border of the frontal bone, behind the external angular process, through a small portion of the great wing of the sphenoid, across the back part of the orbital plate of the frontal bone, through the lesser wing and body of the sphenoid in front of the olivary process, terminating in the inner part of the left optic foramen. A small mass of extravasated blood, partially deprived of its colouring matter, and mixed with lymph, was found between the bone and dura mater in the situation of the fracture. A considerable quantity of spongy vascular new bone was found on the inner surface of the frontal bone, not near to the fractured edges altogether, but encroached upon them in some places: in the situation of the lesser wing of the sphenoid the line of fracture was obliterated from new bony deposit, whilst across the body of the sphenoid no new bone had been thrown out. Besides a thin elevated margin of new bone found in some places near the contiguous edges of the fracture, a thin but dense layer of fibrous tissue was found inlaid between them.

A thin layer of false membrane, having all the characters of extravasated blood deprived of its colouring matter, was found adherent to the parietal arachnoid covering the dura mater, corresponding to the upper surface of the right hemisphere: a similar membrane, but less extensive, was found on the left side. The visceral arachnoid and pia mater were healthy: a considerable quantity of serous fluid in the lateral ventricles. The brain healthy.

Throughout the greater part of the con-

tigious edges of the fracture, a thin edge of newly deposited bone was found; the edges of the fracture smooth and rounded off, and in one part the line of fracture quite obliterated from deposit of new bone; in-laid between the contiguous surfaces of the whole length of the fracture was some dense fibrous tissue, with scattered calcareous particles deposited in it. In the case of fracture of the base of the skull, reported by Mr. Henry Lee, and the preparation of which is in the museum of the College of Surgeons, complete bony union has taken place in some parts, injury having occurred two years previous to the death of the patient.

The mode of reparation of fractures of the skull appears somewhat similar to that of other bones; lymph is thrown out between the edges and surfaces of the fracture, soon becoming converted into fibrous tissue, in which calcareous particles are deposited. The same material of union was found between the fractured edges at the base, and also those of the vertex,—an interesting fact, as the mode of development of these parts is different.

Dr. BENCK JONES exhibited a

Cystic Oxide Calculus,

from a man, *æt.* 45, Nov. 22, 1848. Had excessive hæmaturia for three weeks, which was stopped by drachm doses of Tr. Ferri Muriat. Some tenderness in the right loin at times, and has frequently passed calculi for the last twenty years: at one time many together, like sugar-candy. Urine was acid at 12:30, contains much pus, and albumen in considerable quantity.

Jan. 24, 1850.—Was dying: has had occasional attacks since Dr. Benck Jones saw him for hæmaturia. No effusion in chest, and no disease of the heart.

26th.—Died: well-formed body.

One large calculus and some smaller pieces were present in the left kidney. The calculus was not loose in the pelvis, but adhered, and required to be cut out. The mammary processes of the kidney were absorbed, and the whole structure was encroached on. The irregular cavity thus formed by this dilatation of the pelvis contained a quantity of highly offensive purulent fluid. The ureter appeared pervious, but it was thickened, and the lining membrane was inflamed. The right kidney was very small, being less than one half its natural size. It was remarkably thin. The capsule was firmly adherent, and when removed the cortical surface was very rough, with a granular surface. No urinary cysts were observed on it. On section the cortical structure was seen very much coated, and of a very deep colour. A considerable quantity of fat surrounding both kidneys

closely adhered to the surface of the capsules and to the surrounding cellular tissue. The mucous lining of the bladder was near its neck more vascular than natural; otherwise healthy. Nothing else was examined.

Mr. COULSON exhibited a specimen of

Cancer of the Penis,

removed from a man, *æt.* 66. Two years ago a wart appeared on the left side of the corona glandis, which increased very little for the first twelve months; but after that rapidly, till it attained its present condition. The left portion of the prepuce is everted, ulcerated, and converted into a scirrhous mass; the right portion is not everted: on its inner surface there is a large mass of encephaloid disease connected in some parts with the glans. The glans is in part destroyed, and the remainder converted into this encephaloid structure, from which could be squeezed an abundance of cream-like fluid. Under the microscope, numerous cells, some stellate, some caudate, and others elongated at both extremities, were observed; a few were round. The pubic extremities of the corpora cavernosa contained no cancer cells.

For some time there had been a very copious, thin, offensive discharge from the part, and latterly occasional profuse hæmorrhage, and occasional shooting pains; but this symptom had not been severe. He looked pale and enfeebled, but this appearance had not manifested itself till the last week, soon after the last bleeding. The glands in the groin were not affected.

Mr. HOLTHOUSE exhibited a specimen of *Fractured Cervix Femoris within the Capsular Ligament,*

from a male, *æt.* 56, taken to Westminster Hospital School of Medicine for dissection, and remarked that the specimens of this accident contained in the various museums examined might be grouped under three heads. First, those in which perfect bony union had taken place between the fractured extremities—a very rare result; second, those in which ligamentous or fibro-cartilaginous union to a greater or less extent had taken place; and third, those in which no union whatever had been effected. The specimen was an example of the last-mentioned condition, and presented the following appearances:—The head of the bone was within the acetabulum, but that portion of it which originally was continuous with the neck had become hollowed out into a shallow, cup-shaped cavity resembling a second acetabulum; the surface of this concavity was hard, smooth, and polished. The neck of the bone had disappeared in all but its root, which was rounded off and polished

into a sort of head, that played in the above-described cavity. A chain of smooth oval bodies, like loose cartilages, connected together by ligamentous structure, was found in the interior of this false joint.

Dr. PRAGOCK presented for Mr. GAY a *Portion of Intestine which was punctured in Tapping the Abdomen for Ascites.*

The puncture was made about an inch below the umbilicus, but nothing passed through the canula. The trochar was then introduced about an inch below this, and the fluid drawn off. This latter wound healed; the former remained open. No discharge took place for some days, and then some thin bilious-looking fluid oozed out. Ten days after the operation the liver could be readily defined, and the edge of the left lobe felt as low as the umbilicus. Below this, and on each side of the wound, a resonant sound was elicited. The fluid from the wound was bile, but with little or no odour. The bowels acted regularly. The sore in five weeks was completely healed. The peculiar sensation referred to by Dr. Bright as diagnostic of adhesions of the peritoneum was communicated to the hand. For a day or two the sensation was like a bag of small stones, as if the gall-bladder, filled with calculi, had been wounded, and was adherent to the abdominal walls. She died three months after the operation, from diseased liver.

The liver was extensively diseased and large, especially the right lobe. The gall-bladder natural. Opposite the first puncture the jejunum was firmly adherent to the abdominal walls: this was obviously the seat of injury to the intestine. The venterum had contracted adhesions just above the femoral ring on the right side; and a portion of small intestine, including the wounded piece, had passed through an aperture in the peritoneal duplicature, and retained it in the position in which it was found.

Mr. TOYNBEE exhibited specimens of *Ossous Tumors developed from the Processes of the External Auditory Meatus*, removed from a man, æt. 70, who was not known to have been deaf during life. In the early stages of their development these tumors are not usually accompanied by a diminution of the power of hearing, but they sometimes so much increase in size that the meatus is entirely obliterated. In each of the preparations one tumor is observed to grow from the anterior and a second from the posterior wall of the meatus. They are opposite each other, and are situated midway between the *meatus tympani* and the orifice of the meatus. In each the tumor originating

from the posterior wall is larger than that from the anterior; in the right ear the canal is reduced to one-half, in the left to one-third its natural size. The structure of diseased growth is much the same as that of the surrounding bone: the whole of the petrous portion is, however, more dense than natural; in some cases these tumors are dense and smooth, like ivory. In the recent state they were covered by the lining membrane of the meatus, which tended considerably to diminish the calibre of the tube.

Although this disease is far from being rare, it does not appear to have been described by any writers on diseases of the ear.

In the right ear an additional abnormal condition is observed; it consists in the deficiency of the osseous sulcus lateralis in two places: and here the mucous membrane lining the mastoid cells is in contact with the dura mater forming the anterior wall of the lateral sinus. In each ear the canalis caroticus is contracted to one-half its natural size.

WESTMINSTER MEDICAL SOCIETY.

April 14, 1850.

Dr. MURPHY, President.

Remarks on the Health of London during the Six Months ending the 30th of March, 1850. By Dr. WEBSTER, F.R.S.

ADVERTISING to his previous communication made to the Society at the first meeting of the present session, the author said, that the remarks he now proposed reading were intended to be a continuation of the subjects then discussed; and he believed they would perhaps seem more interesting to the fellows, when they heard, by way of preface, that the public health in London, during the last six months, had been satisfactory, as shown by the amount of deaths being less than the ordinary average; and still more so, seeing they were considerably under that of the parallel six months of the previous year. For instance, 30,163 persons then died in London, whereas only 26,096 were carried off during the recent period, being a diminution of 4067 deaths, or more than 15½ per cent. in favour of the winter just terminated. This favourable aspect chiefly arose from the diminished mortality of several diseases that proved both prevalent and fatal during the six months first mentioned. Thus, scarlatina, which destroyed 2541 individuals during the six months ending the 31st of March, 1849, was only fatal to 685 patients in the corresponding months of the recent season,

being a diminution of 1856 deaths from that disease. Again, by typhus, 963 persons have died recently, against 1882 during the corresponding six months of last year, being a decrease of 680 deaths in the by-gone six months. By small-pox, only 194 deaths are recorded during the two quarters ending the 30th of March last, instead of 641 in the previous period, thus making 247 fewer fatal cases by that frequently virulent malady. From diseases affecting the organs of respiration, including phthisis, Dr. Webster remarked that the difference of mortality was in favour of the present year, especially during the last quarter, 4423 having died from complaints of the above description, instead of 4616 recorded, by the same causes, during the parallel three months of 1849, or a decrease of 188 deaths in that period. The author next adverted to cholera, which did not subside till towards the close of 1849, seeing 494 persons died from that malady in the fourth quarter of last year; but, in the first three months of the present, only eight fatal cases have occurred in London by that epidemic, instead of 516 who became its victims during the similar quarter of 1849. Influenza, which proved so very destructive in the six winter and spring months of 1847 and 1848, as to carry off 1739 persons in London alone, has proved fatal only in 87 cases during the corresponding period ending the 30th of last March, whilst it was also an equally mild disease in the winter of 1848 and 1849, seeing only 77 deaths are recorded from influenza in the latter season.

The author subsequently alluded to the diseases which have recently exhibited an increased rate of mortality. The first he mentioned was measles, whereby 641 individuals, mostly children, died during the six months ending last March, contradistinguished to 391 throughout the corresponding period of 1848 and 1849, thus making an excess of 250 deaths by that eruptive complaint in the recent half-year. By hooping-cough 715 children have recently died, against 645 during the six months of 1848 and 1849, being an increase of 74 deaths from pertussis in the more recent season. From affections of the brain and nervous system, so often fatal in this country, there has been a trifling diminution, 3092 persons having died from these diseases during the six months terminating the 30th of March last, compared to 3162 in the corresponding period of 1848 and 1849, thus giving 60 fewer deaths recently by these maladies. Respecting diseases of the heart and bloodvessels, the number of fatal cases have been almost identical, 1010 persons having died from these affections during the six months em-

braced in the present report, against 1002 in the corresponding period ending the 31st of March, 1849. Afterwards, some remarks were made relative to childbirth and puerperal fever, which, last season, proved less fatal than previously, 339 females having died from such causes during the two quarters terminating in March, 1849; whereas the deaths were, from similar causes, only 242 in the corresponding six months of the present season; hence making a decrease of 97 fatal cases, or of upwards of one-fourth in the recent rate of mortality. Dr. Webster then alluded to *Hydrophobia*, of which horrible disease a fatal instance recently happened in London, where, fortunately, such occurrences have been very rare, compared with former seasons. The unfortunate patient was a girl, aged four years, who had been bitten by a mad dog 101 days previous to the day she died, thus showing that a person is not always safe, although six weeks—commonly believed sufficient—may have elapsed after exposure to the virus. When dogs were formerly employed in drawing vehicles through the streets of London, hydrophobia was much more common than now, only the above, and another case, in 1848, having taken place, throughout the metropolis, for upwards of three years; whereas, during 1838, 12 fatal instances, by the above dreadful death, are recorded, with others in subsequent years; the recent diminution of this malady being, in the author's opinion, chiefly owing to the above-named new police regulations. Compared with the facts now stated, although perhaps not generally known, hydrophobia is much more frequent in other countries than in England. For instance, in Prussia, during 15 years ending 1834, so many as 1073 individuals—527 males and 546 females—fell victims to hydrophobia, for which there is no remedy, the only chance of safety, when bitten by a rabid animal, being immediate excision of the wounded part, and the application of cupping-glasses afterwards.

The large number of children and young persons who annually die in London, next occupied attention, respecting which important question the author stated, that of the 13,219 deaths registered, from all causes, during the first quarter of the current year, 5484 were under 15 years of age: so that about 41½ per cent. of the whole mortality occurred in young persons, many being infants. Besides scarlatina, pertussis, and measles, which always prove so fatal in children, as already stated, the author mentioned hydrocephalus and convulsions. By the latter complaint, 483 individuals died during the last quarter, all being, with few exceptions, infants or young persons; only three having passed their fifteenth year.

From hydrocephalus 370 deaths are also recorded in the same three months; only three of the cases having attained the age of puberty. Commenting on these facts, Dr. Webster considered the younger the patient the greater the danger which attended such complaints; whilst the practitioner may, with more confidence, give a favourable prognosis in older persons than in infants, or in those of early age and feeble constitution. The number of young persons who lose their lives by violence in London is also remarkable; thus, besides other causes, not fewer than seventy-nine individuals, under fifteen years of age, perished by burns and scalds, since the 1st of January. Again, from the want of breast-milk, thirty-nine infants are stated to have died during the same quarter; whilst in the two previous years, 1848 and 1849, it is reported that 347 infants died from the same cause. Such a large mortality from the want of breast-milk, the author thought mainly arose from the objectionable practice so prevalent among the upper and middle ranks in this country, of employing wet-nurses, instead of following the true dictates of nature, which enjoin each mother to suckle her own offspring, as this is alike beneficial to parent as to child. Besides, it should be also remembered, that in consequence of the former unnatural proceedings, the hired nurse's own infant, being generally fed by hand or neglected, it very frequently thus falls a sacrifice to lucre and fashion. Dr. Webster animadverted strongly respecting this custom, and added, excepting in very particular cases, and where the mother is totally unable to afford sufficient or proper nourishment to her own infant, the employing others should never be sanctioned, not only on physical but on moral grounds. The practice is contrary to Nature's laws; is injurious to mother and child; and, further, it holds out a premium to immorality, seeing strange nurses are well paid, highly fed, and often pampered luxuriously, quite at variance with their previous position; hence, especially if unmarried, they become tempted again to qualify for another similar situation. Besides the cause now adverted to, as influencing the mortality of infants and children, the author enumerated improper feeding, defective clothing, and exposure to the vicissitudes of the weather in this variable, although otherwise healthy climate, even among the affluent or those in comfortable circumstances, but still more amongst the poor and dissolute. Dr. Webster then referred to the large amount of deaths reported from hospitals, workhouses, and prisons in the metropolis, nearly one-fifth of the entire number, from all causes,

having taken place amongst such inmates, or 2353 fatal cases out of the total mortality, amounting to 13,219 during the months of January, February, and March, of the current year. This, however, did not include dispensary patients, out-door parish paupers, nor those so often attended gratuitously by practitioners. If all eleemosynary cases were taken into the calculation, it would be then no exaggeration to say, that at least one-third of the sick persons who died in London received unpaid services from many very hard-worked, and but too frequently ill-requited, members of the medical profession. Various causes contributed to produce the recent satisfactory state of public health in London, which the author next discussed, the chief beneficial influences being, in his opinion, the improved physical condition of the metropolitan population; the abundance of cheap and good provisions; the increased attention given to sanitary measures; the greater care paid by individuals to their own health, after the alarm experienced last summer and autumn; the less variable and more salubrious constitution of the atmosphere recently noticed; and, lastly, so large a number of the debilitated, dissipated, and diseased portion of the community having died during the epidemic cholera and diarrhoea of 1849, that there actually remained less *pabulum morbi* than in previous or ordinary years. Dr. Webster then described the atmospheric phenomena prevalent during the last three months, when London proved so healthy; and he made several elaborate yet interesting statements thereon, of which it is difficult to give here any abstract. However, it may be stated that he ascribed much of the unusual salubrious condition of the metropolis, during the first quarter of the present year, to the temperature of the air being generally less variable than in other more unhealthy seasons, especially as the difference between the cold of the day and night-time was often inconsiderable. The weather, although cold, never became very inclement, whilst the sky was generally cloudy or overcast; the wind frequently S.W. or southerly; electricity was often positive, and the barometric pressure generally ranged high. Taking every circumstance into consideration, and speaking from observations made during late years, respecting the influence of the atmosphere, &c. in causing or modifying disease, Dr. Webster felt fully warranted in saying, whenever the difference between the temperature of the day and night time was excessive, with cloudless or even hazy weather, especially if calms prevailed, or only slight winds, if the electricity was small, the quantity of

moisture so inconsiderable as to make the air dry for any continuance, with a low barometric pressure, then sickness will abound, and more deaths be consequently registered than under different atmospheric phenomena. On such difficult yet important subjects as those now brought under notice, Dr. Webster referred for information, and as examples to imitate, to Hippocrates, Aristotle, Galen, and Aretæus, amongst the ancients; or to Sydenham and others, in more modern times; whose writings physicians should peruse if desirous of obtaining knowledge respecting the points under discussion; which study cannot prove otherwise than highly useful when investigating the origin, nature, and management of epidemics, as likewise of even ordinary maladies. The author then adverted to the important and interesting fact often noticed after the disappearance of a very fatal epidemic malady, when, generally speaking, the rate of mortality declines considerably during the subsequent season. This beneficial result followed the cessation of influenza which prevailed so severely during the winter of 1847 and 1848; the number of deaths from all causes having fallen 3490 during the subsequent quarter, terminating the 30th of June, 1848, contrasted with the three months ending the 31st of March previously. Again, after scarlatina, which was so fatal in the winter of 1848 and 1849, the mortality from all causes, during the quarter ending the 30th of June, 1849, decreased 2430, compared with the number registered in the three months terminating the 31st of the previous March. A similar effect followed the epidemic cholera of last year; and hence it may be almost predicted, with some certainty, whenever any severe malady prevails in the community, whereby numbers fall a sacrifice, the subsequent year will very likely prove salubrious, and furnish a smaller rate of mortality in comparison with the former unhealthy season. After several other general remarks, Dr. Webster, in concluding his paper, said, that similar to the observations made of late years by most medical practitioners, the common character or diathesis of most diseases throughout the past six months has become asthenic, and, in many cases, accompanied by great debility or exhaustion, which required support, and often tonic treatment, although the symptoms apparently seemed sometimes so inflammatory as to warrant antiphlogistic measures. This peculiarity was, however, less remarkable during the recent season than in those immediately preceding, in which almost every form of malady if not during the early stages, very afterwards, assumed an asthenic chara

Such was especially the case when influenza proved so fatal two years ago; again, during the prevalence of scarlatina in the winter before last; and lastly, but even more decidedly, at the time cholera, diarrhoea, and dysentery, produced so great ravages amongst the metropolitan population, as to send rapidly to their graves, in the months of July, August, and September of last year, actually 15,512 human beings by these three diseases, thereby making, with other fatal maladies, a larger comparative amount of deaths ever previously recorded in London during so short a period, since the great plague, upwards of 184 years ago, at which epoch, as during last autumn, a much more extensive mortality occurred than the author hoped would be again witnessed by the present generation in the mighty metropolis of England, now teeming with its 2,300,000 inhabitants, forming the emporium of intellect and the centre of civilisation.

WESTERN MEDICAL & SURGICAL SOCIETY.

April 12, 1850.

Address of Sir Benjamin Brodie, F.R.S., &c.

THIS Society celebrated its fourth anniversary this evening by a conversazione, in the large room in the Cadogan Gardens, Sloane Street, which was quite filled on the occasion by members and visitors. Among the latter we noticed Dr. Murphy, the President, and several of the leading members of the Westminster Medical Society.

The President, Sir Benjamin Brodie, having taken the chair at 8 o'clock precisely, the honorary Secretary proceeded to read the Report of the Council. The report commenced by congratulating the members on the continued prosperity of the Society, and informed them of the donations which had been made to the library during the past year, by means of which, and by purchase, upwards of 140 volumes had been added, independently of plates, pamphlets, and monographs. It was mentioned as a most gratifying circumstance, that the library had been more extensively consulted than during any preceding year; and it was announced that a printed catalogue would soon be issued. The reading-room was stated to have been well supplied with journals, and to have been maintained in great efficiency and comfort. The report

ed the valuable communication made at the meeting—
tical discussions
the kindly spirit

by which these had invariably been characterized, went on to allude to the steps which had just been taken to extend to medical students and assistants whatever advantage the Society could afford, by admitting them, under the title of associates, to all the privileges enjoyed by members, except participation in the management of the society's affairs. The Council referred in highly eulogistic terms to the important services rendered the Society by Sir James Clark, in acknowledgment of which, as well as for the sake of expressing the high sense entertained of his distinguished attainments as a physician, and his strenuous efforts on all occasions to uphold the dignity and elevate the character of the profession, he had been elected during the past year its first honorary member. The report concluded by an emphatic statement on the part of the Council, founded on the experience of four years, that the Society had been useful beyond their expectation—not only by conferring the benefits to which allusion had already been made, but in bringing together and uniting in cordial co-operation individuals previously unacquainted with each other, and thus correcting prejudices and removing unfounded jealousies. With this conviction the Council felt justified in making an earnest appeal to their medical brethren dwelling in the neighbourhood who had not yet joined the Society, to come forward and participate in all the benefits it was calculated to confer,—and they expressed their hope that eventually every resident practitioner would be enrolled among its members. If in a great suburban district like this such an union of the profession for medical and scientific objects could be effected, we might anticipate that similar institutions would be established in other districts of the metropolis, and that all acting in concert with each other, and with our great central societies, would exhibit the medical profession to the world in its proper character, of one united body zealously striving to advance its knowledge, that it might faithfully fulfil the high and important duties committed to its charge. This report was adopted by acclamation, as was also the report of the auditors, which represented the affairs of the Society to be in a favourable condition, there being a balance of nearly fifteen pounds in hand after all demands were satisfied.

A resolution was then carried unanimously, conveying the thanks of the Society to the President and officers for their services during the past year.

Sir Benjamin Brodie (who was received with great applause) returned thanks; and having first alluded to the state of the So-

ciety, as set forth in the report, proceeded as follows:—

When I last had the honour of addressing you, I pointed out what I conceived to be the principal advantage of an institution of this kind. Among the foremost of these I mentioned the maintenance of friendly and generous feelings among those who are engaged in the same useful and honourable pursuits, tending to supersede those feelings of distrust and jealousy and petty rivalry, which are unworthy of a liberal and scientific profession; but which (such is the weakness of human nature) are too apt to exist in every class of society, the members of which are not brought into personal communication with each other. For this reason, and setting aside all other circumstances, I am convinced that a society such as ours must tend, in no small degree, to the comfort and happiness of the individuals of whom it is composed. As there is nothing more painful to a well-constituted mind than to be at variance with, suspicious, or distrustful of others, so is there nothing which tends more to elevate the moral character, or to inspire us with peaceful and contented feelings, than the consciousness that our competitors are our friends, with whom we are on such a footing that we mutually make allowance for each other's feelings, and are on all occasions ready to do justice to each other's good qualities, whether of the head or heart.

What I have just now mentioned is a mere matter of fact, and I am sure that there is no one among us who has been for many years engaged in medical practice who will not at once assent to the truth of these observations. It will be well for those who are just entering on the active duties of life, and of whom it may be presumed that they have many years of busy occupation before them, to avail themselves in this particular of the experience of older persons, and shape their course accordingly; and I venture to say that the doing so will save them from many heart-burnings, many sleepless nights, many anxieties which they would have to endure otherwise. In human nature there is much weakness,—there are many faults and failings,—but mixed up with what we would wish to be otherwise, there is much that is good, that is kind, and noble, and after a long experience of the world I have come to the conclusion that the true way of dealing with mankind is, as a general rule, to trust to their good qualities rather than to the controlling of their bad ones. If you would make a man a gentleman, you must treat him as a gentleman. We are all and every one of us liable to be mistaken as to the motives by which others are influenced, especially in matters which are supposed to concern

our individual interests. To suspect another of being influenced by unworthy motives, is to degrade him in his own estimation; and there is nothing which a proud and independent spirit will find it so difficult to forgive; as, on the other hand, there are few persons who will not feel some sort of gratitude for having the most favourable construction put on their conduct, even when their conscience tells them that it is more than they really merit.

Gentlemen, we are all of us, whatever may be the department of the profession to which we belong, engaged in an arduous undertaking. The lives of individuals, the happiness of families, are entrusted to our care. The medical practitioner can never be off his guard. He never can say, "To-day I have nothing of consequence to attend to." The next hour (be it day or night) may place him in a situation in which the life of another person and his own reputation are concerned; and in which, in order that he may preserve the former, and establish or maintain the latter, all his knowledge, and skill, and prudence, and presence of mind, must be summoned to his aid.

It would be needless for me to dilate on the responsibilities, the labour, the anxieties belonging to medical and surgical practice, of which even the youngest man among us must be fully sensible. The public generally have but an imperfect notion of the amount of moral restraint and intellectual effort necessary for the right performance of our duties. We, on the other hand, viewing these things more closely, are, perhaps, too apt to believe that there is no profession of which so much is required as is required of ours. Let us, however, look as closely at other pursuits in life, and I much doubt whether they will gain by the comparison. They have all their respective advantages and disadvantages, and the latter more especially are liable to be overlooked by those who view them from a distance. The solicitor will tell you that questions which relate to the preservation of property are even more perplexing, more harassing, than those which relate to the preservation of life: that the anxieties to which he is liable, instead of being brought to a termination in a few days or weeks, may be prolonged for months or years: that a mere technical error, long overlooked, may rise up in judgment against him who makes it, after a very long interval of time.

But it may be said that it is otherwise with the higher department of the Law; indeed, is in great measure true:—
—ter has his causes for anxiety
— another kind. How many
ers of the bar who sit in
year after year, and go
, and yet scarcely obtain

a sufficient number of briefs to pay the expenses of their travelling and their chambers! Then, if a barrister succeeds in obtaining an extensive practice, the tenure by which he holds it is proverbially uncertain. Some new candidate may present himself, who is more popular with solicitors, who, perhaps, with less real knowledge of law, has a greater tact in managing a jury, and may push him from his stool.

Then, is the profession of the Church to be preferred, as a profession, to our own? There are, it is true, many with ample benefices, who lead a life of comparative ease; and many on whom these advantages are properly bestowed: but how many are there also, pious and devoted persons, living on the smallest stipend, passing through life without the means of putting out their children decently in the world; and subject to this especial mortification, that, except under some peculiar circumstances, they can do little by their own exertions for themselves, and must owe their advancement to the favour and caprice of others, and not to their own merits.

Then, have those engaged in Mercantile Speculations, or any branch of trade, no causes of anxiety? How many do we see apparently prosperous and wealthy, all at once cast down from their high estate, and brought to ruin through their own want of caution; or, it may be, without any fault of their own, through the imprudence and dishonesty of others! With them, even in the midst of success, there may be cause for apprehension. I was desired to visit one of the family of an extensive merchant in the neighbourhood of London. He lived in a magnificent house, with every sign of luxury about him. His medical attendant, whom I met on the occasion, observed—"Mr. — himself is ill; but I know the reason of it, he is always so when he expects the arrival of his China ships."

*"Ceterum de genere hoc, adeo sunt multa loquacem
Delassare valent Fabium."*

Such was the remark of a great moralist when discussing a somewhat similar question; and it would be easy for me to extend these observations, though it would be a needless waste of time to do so.

Every profession has its advantages and disadvantages. I have referred to the labour, anxieties, and responsibilities of that to which we ourselves belong; but it is well for us to look to the other side of the account. It is not a blank page; and I am much inclined to believe that whoever views the matter with a candid and impartial spirit will find that there is a considerable balance on the favourable side.

I know that it may be said that having been during my whole professional life engaged in one particular line of practice, I cannot be a fair judge of what the profession may be in its other departments. I do not, however, admit the justice of this conclusion. I have friends in all parts of the profession; I know the nature of their occupations, and have watched their progress for many successive years. Then I am confident that there is no situation more trying to him who holds it than that of the young hospital surgeon, exposed (as he very properly is) to the remarks and criticisms of the public, nor any in which there is less repose for the mind, or greater reason to feel anxiety as to the future, than that of an individual whose practice is confined to surgery.

Let us look first at the influence which the medical profession has, or ought to have, on the minds of those who devote themselves to it. Their immediate object is always to do good to others: they are engaged in the pursuit, not of a trade, but of an important science, which concerns the highest interests of mankind in their present state of existence. The medical practitioner must, for his own sake, always aim at the attainment of truth, and endeavour to observe, to think, and reason correctly. All this is good for his moral and intellectual character; and the result is, that with all our errors, and all the imperfections which belong to us, there is perhaps no class in society, on the whole, more liberal, more free from prejudice, and more disposed to render disinterested service to others, than the great body of the medical profession. Then there is no other profession in which the individuals belonging to it have to depend so entirely on their own character and conduct. Whatever advantages you may obtain in life, you earn them for yourselves: you acquire the good opinion of the public of all classes, but you neither owe, nor can owe, any obligations to the favour of the great. Others may be kindly disposed towards you, but your most zealous friends—your nearest relatives—will not entrust their lives and the lives of their families to your care unless they believe that it is their interest to do so: and hence it is that the medical practitioner who has laboured to obtain an adequate knowledge of his art, and who honestly and diligently performs his duties, has a right to consider himself as one of the most independent members of society.

I must here confess that it seems to me that this sense of independence is not sufficiently impressed on the minds of a large proportion of our profession. You may be assured that there is no one who thinks it

worth his while to place himself under your care, to whom you are not really of more importance than he can be to you: what you can give to him is more than anything that he bestows on you in return. But, if you would have others do you justice, you must first do justice to yourselves; and how is that to be accomplished? It is by shaping your conduct with a view to the general result, and obtaining the good opinion of society at large, of persons of all classes, high and low, rich and poor, without reference to what may be said or done in particular cases or by particular individuals. We have to deal with the wise and the foolish, with those who know how much, or how little, they may justly expect from our assistance, and with many the victims of luxury, idleness, and an imperfect moral education, who not only expect too much, but who think that they have a sort of right to expect an exemption from the evils of life, such as it does not belong to human nature to attain. Among the last-mentioned persons we cannot fail to meet with perverseness and caprice; or to find that, when we have done that which it is possible, we are blamed because we have not done that which it is impossible for us to perform. But all this need be no more than a temporary annoyance to the upright and diligent practitioner, who is conscious that he has laboured to attain an adequate knowledge of his art, and that on all occasions he endeavours to do his best. Such persons as I have described may display their caprice by changing their medical attendant, by resorting to one quack after another, and, as far as we are concerned, it is really much more desirable that they should do so, than that they should remain under the care of any one of us, when they think that they can do something better for themselves.

Let me not, however, be misunderstood as making these observations in any spirit of unkindness or hostility to those to whom they relate. If we claim, as claim we must, that allowance should be made by others for our own failings and imperfections, much more are we called upon to make allowance for the failings and imperfections of those who labour under the inflictions of bodily disease. We have to a great extent the power of relieving pain and preserving life, but our power is limited; on the other hand, there is no limit to the desire of obtaining relief, and the anxiety to live may still linger in those who are on the point of death. Under these circumstances it seems almost a matter of course that those to whom we can render no further aid, and whose minds are probably weakened by previous

illness, should be easily induced to seek for aid elsewhere, and be ready to listen to any promises of men, however vain and absurd, or even dishonest, those promises may be. Taking all things into consideration, it appears to me to be a question whether there is not, on the whole, more cause for wonder in the patience of the many than in the impatience of the few; and whether the gratitude of those who over-estimate our services does not even more than compensate for the neglect of those who withhold from us the credit which we really deserve.

In enumerating what I believe to be the advantages belonging to the profession of which we are members, there is one other point which I ought not to overlook. However much assistance we may in early life derive from attendance on lectures, and afterwards from the study of books, the knowledge which we thus obtain, necessary as it is, is nevertheless only of a preliminary kind, and is nothing at all in comparison with that which each individual derives from his own personal experience. The consequence is, that every succeeding year the medical practitioner becomes more equal to his duties than he was before; and, except it be in the case of those whom an over-weening self-confidence renders careless and indifferent, this improvement continues as long as we retain the integrity of our faculties unimpaired by disease or age: hence it is, that medical practice is not liable to the fluctuations of which those engaged in some other professions have too much reason to complain. In his own circle, the place of the experienced and judicious medical practitioner is not easily supplied. This his patients feel, and this he must feel himself. The principal source of anxiety to a professional man in the beginning of his career is the doubt whether he will maintain whatever reputation he has been able to acquire. If any one case turns out less fortunately than he had reason to expect, he dreads (and much more than he need to do) the influence which it may have on his future fortunes. But this source of anxiety gradually diminishes as years increase, and at last he discovers that he may safely rely on his general character, which is independent of the successful or unsuccessful termination of a particular case.

But, after all, the value of the profession to each individual engaged in it depends more on the individual himself than on any extraneous circumstance. It is an indifferent and irksome trade; but it is a noble and interesting science. If you would pursue it with credit and comfort, you must regard it as the latter, and not as the former. And this explains one great ad-

vantage of a Society such as that which I now address,—which brings us together as men of science, not as the proprietors of a railway or canal, to discuss the value of shares and the amount of dividends, but to compare our experience, to increase our knowledge, and thus to have our minds elevated above the meaner pursuits of life.

This address was listened to throughout with the deepest attention, and the applause at the close was loud and long-continued.

The following gentlemen were then elected to fill the various offices during the ensuing year:—

President.—Dr. Robert Lee, F.R.S.

Vice-Presidents.—Dr. Aldis, Mr. Barnes, Mr. Gaskell, Mr. Godrich.

Treasurer.—Dr. Woolley.

Council.—Dr. Barclay, Mr. Bullock, Dr. Christian, Mr. Douglas, Mr. Haden, Mr. Ince, Mr. Martyn, Mr. Muller, Mr. Phillips, Dr. Simpson, Dr. Traquair, Mr. Whitmore.

Secretary.—Mr. Seaton.

Auditors.—Mr. Keen and Mr. Webb.

The formal business being concluded,

Dr. MANTELL, at the request of Sir Benjamin Brodie, then favoured the meeting with an address on the osteology and physiology of the colossal reptiles from the south-east of England, of which there were some unique and most interesting specimens on the table, from his own collection, and of the gigantic extinct struthious birds of New Zealand, collected by his son, Mr. Walter Mantell. The Iguanodon, of which the lower jaw was exhibited, Dr. Mantell described as the most extraordinary example of the mammalian modifications of structure, grafted, as it were, on the saurian type. With a lower jaw of the true reptilian character, composed of six bones on each side, with a constant succession of teeth, and possessing a symphysis analogous to that of the larger herbivorous Edentata; a pectoral arch, also truly saurian, consisting of a largely-developed coracoid and scapula, sternum and clavicle; and a spinal column, in which the neurapophyses are united by suture to the body of the vertebra; were associated an arrangement of the teeth as in the ruminantia; femora and humeri with well-developed articulations and trochanters, and large medullary canals; and tarsals, metatarsals, and phalangeals, resembling those of the hippopotamus. Dr. Mantell then dwelt at some length on the structure of the lower jaw of the iguanodon on the table, which must have been nearly four feet long when entire. He showed how beautifully the great development of the muscles and soft parts that originally covered the jaw (as demonstrated by the

number and large size of the foramina communicating with the great dental canal, and distributed externally along the ramus down to the symphysis) corroborated the inferences deducible from the mammalian-like teeth, and the projecting edentulous anterior part of the lower jaw, which closely resembled that of the *Mylodon*.

The teeth (which the illustrious Cuvier had at first regarded as the incisors of the rhinoceros) unquestionably indicated that the original must have performed the mastication of vegetable substances, like the herbivorous mammalia; but, as no one living reptile has cheeks or fleshy lips, it was difficult to conceive how food could have been retained during mastication. In the jaw before us we found that marvellous adaptation of means to ends ever present in the works of the Creator. By a simple modification, the composite lower jaw of a reptile was made an efficient grinding instrument, and provided with muscles for the required movements, cheeks for the retention of food, a prehensile tongue, and a pendulous under lip, to seize and pluck the foliage and young stems of the arborescent ferns, palms, &c., with which the fossil remains were found associated. Dr. Mantell particularly solicited the attention of the physiologists present, to the statements he advanced as proving the correctness of his Memoir on the Maxillary and Dental Organs of the *Ignemodon*, published in the Philosophical Transactions, and for which the royal gold medal of 1849 was awarded him.

Dr. Mantell then gave an animated account of the circumstances under which the bones of stupendous extinct birds occurred in New Zealand, and briefly noticed the splendid collections made by his eldest son. After a perspicuous sketch of the most remarkable peculiarities of the osteology of the *Moa* or *Dinornis*, Dr. Mantell described the structure of the legs and feet of the ostrich, emu, and cassowary, as illustrative of those of the *moa*, as shown by the pair of feet on the table belonging to the same individual bird, dug up by Mr. W. Mantell in a turbary deposit, in the Middle Island. Every bone, including the two tarso-metatarsals, was numbered seriatim on the spot as dug up; and, being in an admirable state of preservation, had been articulated by Mr. Flower, under Dr. Mantell's direction, and thus for the first time was presented the normal structure of the feet of this gigantic and robust species of the *moa*. The characters of the feet, as compared with those of the recent species of struthionids, resemble those of the living *Apteryx* of New Zealand, the metatarsals being enormously strong, and the phalanges relatively larger, and more arched, than in

the ostrich, cassowary, &c., being evidently designed as powerful instruments for scratching or digging up roots, or other subterranean vegetable substances. Dr. Mantell, in conclusion, briefly considered that most interesting and mysterious physiological problem, the appearance and extinction of species and genera. He took a rapid and lucid view of the facts which support, if they be not regarded as sufficient to establish, the opinion of some eminent philosophers, that, as the duration of the life of every individual of a species is immutably restricted within very narrow limits, in like manner the existence of a genus or race on the surface of the earth, is doomed to terminate within a certain definite period. Some races may flourish only a few centuries; some may exist for thousands of years; but their final extinction is irrevocably determined by the laws of their organisation.

The bearing of this problem on many important physiological phenomena,—as the supposed origin of epidemics from the sudden development of peculiar types of invisible animalcules, &c., was discussed in a candid and philosophical spirit, which was earnestly applauded by the meeting. In conclusion, Dr. Mantell begged to apologise for the discursive nature of his discourse, and in reference to his observations on the past condition of the earth and its inhabitants, as deducible from the remains of the successive races of animals and plants which had flourished for a while, become extinct, and been succeeded by other types, he only offered them as speculations, to be modified or abandoned with the advance of science; for our knowledge and our judgments are in general only founded on probabilities, more or less great, which it is very important, but very difficult, to appreciate at their just value.

Mr. TOWNSEND was then kind enough, at the President's request, to give a short statement of his researches into the normal structure and various diseased conditions of the membrana tympani, and to exhibit a most beautiful series of preparations in illustration of them.

The members and visitors afterwards proceeded to examine the various objects of interest and curiosity scattered about the room. Among these were some rare books and valuable plates, lent by Sir James Clark, Dr. Pettigrew, &c. &c., and particularly some beautiful plates published by Dr. Piragoff, under the direction of the Russian Government, showing the condition of the intestinal canal after death by cholera; and some plates of a species of elephantiasis peculiar to Norway, issued by the Norwegian Go-

vernment. Both these series were furnished by Mr. Haden. There was also a variety of curious instruments. But nothing in the room excited more attention than the original sketch of John Hunter, by Sir Joshua Reynolds, from which he afterwards painted the celebrated picture now in possession of the College of Surgeons. This sketch was given by John Hunter's widow to the uncle of Mr. Knight, of West Brompton, who kindly lent it to the Society for the occasion.

LIVERPOOL MEDICAL AND PATHOLOGICAL SOCIETY.

April 5th, 1850.

Intra-Uterine Polypus. By Mr. LONG.

MR. LONG exhibited a specimen of a small intra-uterine polypus, procured from the dissecting-room: he knew nothing of the individual from whom the specimen was procured; it appeared, however, that she had never borne children.

He also related a case of vesicular polypus occurring in an unmarried hysterical female: two polypi existed in this case growing from the os uteri; one was sufficiently long to protrude through the os externum, the other was considerably shorter; they were nearly of the same diameter in their whole length, being about the size of a leech when distended with blood; they were of a dark colour, and bled freely when bruised. He attempted to remove the larger one by seizing it with the forceps and twisting it, but not succeeding he subsequently passed a ligature around it, sliding it up to the point at which the polypus was attached to the os uteri: in two days it came away, and along with it the smaller one: it presented the appearance of a dead leech when removed. He remarked upon the liability of polypi of this nature escaping detection by an ordinary manual examination, the polypus being pushed up before the finger, and being confounded with the rugæ and folds of the vagina.

He drew attention to Dr. Simpson's recent paper on uterine polypi, and to the remarks made by him, that vesicular polypi are liable to be overlooked by a manual examination, and that they are rarely single, &c.

Spontaneous Dislocation of both Humeri.

By Mr. PATTERSON.

A gentleman, who had not had any previous fits, had a severe attack of epilepsy, in which both humeri were dislocated into the axillæ. They had never been dislocated previously, but were reduced without difficulty.

Relief of Convulsions by Chloroform. By Mr. HIGGINSON.

A child, aged 4 or 5 years, had an attack of frightful convulsions, which were so severe and continuous that death was expected every minute. Chloroform was administered, and in a few minutes the child was in a tranquil sleep, from which it awoke the next morning perfectly well, and has so continued (several weeks).

In another case a girl, about the age of puberty, was seized at chapel with severe convulsions, which continued with great violence. She had not previously been subject to them. Chloroform was administered to her also, and she was soon relieved, and has since continued well.

Dr. IMLACH had read records of four or five cases of puerperal convulsions treated by chloroform with success; and in such cases he should in future give it and abstain from bleeding, unless it were a first pregnancy, with such fullness or swelling of the face or head as showed bleeding to be indispensable.

Endermic Application of Quinine.

Mr. HIGGINSON called the attention of the Society to this mode of using quinine in some cases of phthisis, in which the stomach would not bear it in the ordinary way. When applied to the axillæ after blistering it had checked the sweats and otherwise improved the health.

Mortification after Acupuncture in Anasarca.

Dr. NEVINS requested the opinion of the Society on the following cases:—An old hard-drinking man had acute anasarca after lying out under the hedges for several nights in cold weather, and suffered from great dyspnoea, and other urgent symptoms, which were relieved by treatment. The swelling in his legs did not, however, abate, and several punctures were made with a needle, from which a large quantity of fluid drained away. On the following day a slight appearance of inflammation, with tenderness, surrounded one or two of the punctures, and in about ten days the man died from extensive sloughing of the leg and thigh.

In this case the patient had been an old worn-out reprobate, but the next was not so unfavourable a subject. He was a young man, about 22 years of age, who had acute anasarca from similar exposure. For a few days he seemed to improve under treatment, and the anasarca slightly abated, but the distension of the lower extremities still continued so painful, and the amendment was so slight, that puncturing was practised upon one leg, from the knee to the ankle. He had been taking elaterium for

some days, which had acted freely upon the bowels, and the tongue had become brown and the pulse feeble, which was considered to be owing to temporary depression from the medicine. In two hours after the operation an erysipelatous blush appeared *above* the knee, which gradually spread up to the thigh, across the abdomen, and involved the whole of the opposite thigh and leg, the leg punctured not being affected until it had advanced considerably over other parts. He died in about two days from the operation.

The question which Dr. Nevins wished the Society to consider was, Whether the unfavourable termination in both these cases had been a consequence or only a sequence of the operation, and the erysipelas had merely followed, and not been caused by the punctures? as the prudence of the practice in future depended upon the opinion formed.

Mr. PARKER did not think the operation had occasioned the erysipelas. A boy had extreme anasarca, and he thought of puncturing, but delayed doing so fearing erysipelas, which nevertheless took place, and the boy died from the mortification.

Mr. HIGGINSON did not think these two cases proved the practice to be unsafe. He had never seen bad consequences follow puncturing, and he attributed the erysipelas to some other cause than the operation.

Dr. IMLACH was of the same opinion: but he preferred the plan pursued by Dr. Short in these cases. He always applied a blister, from which the fluid continued to drain, and he never saw erysipelas follow.

SYDENHAM IN FRANCE.

THE English boast of Sydenham, and Sydenham's fame, and call him the "British Hippocrates." The French practically honour him more than the British do: thus, in Bouchardat's "*Nouveau Formulaire Magistral*," we find not fewer than eight *formule* for medicines bearing the name of Sydenham. These are:—1. *Sydenham's beer*.—Rhubarb infused in beer in the proportion of ten parts in a thousand. 2. *Sydenham's white decoction*.—A chalk mixture. 3. *Sydenham's electuary*.—Composed of powder, bark, and syrup. 4. *Sydenham's laudanum*.—Wine of opium. 5. *Sydenham's anti-spasmodic mixture*.—Containing tincture of valerian, and castor, and ether. 6. *Sydenham's ringworm ointment*.—A compound of the ashes of wormwood leaves with oil. 7. *Sydenham's pitule martiales*.—Steel filings and extract of wormwood. 8. *Sydenham's sedative mixture (potion temperante)*.—Consisting of extract of lettuce and poppies, with nitrate of potash and orange flower water.

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Hospital and Infirmary Reports.

FELLOWS' PRIZE REPORTS OF

CASES OCCURRING IN UNIVERSITY
COLLEGE HOSPITAL,

SUMMER SESSION 1845.

By C. H. F. ROUTH, M.D. Lond.

CASE III.—Ely Lock, æt. 22, admitted Tuesday, May 20, 1845, under Dr. Thomson.

CASE.—*Rheumatismus Acutus*—*Endocarditis*? (17th)—*Pericarditis* (26th)—*Endocarditis* (31st). (Particulars obtained from the patient).

This case was not given as a Fellows' Prize Case till the 26th. The early history is therefore imperfect.

Of moderate stature; spare conformation; sanguine temperament; complexion ruddy, but at present slightly jaundiced. Blue eyes; dark brown hair. By occupation a washerman; single. Accustomed to drink from Oj. to Oij. beer daily; very rarely spirits. Was never tipsy. Moral in his habits; accustomed to eat meat twice daily. Appetite usually good. Has always been sufficiently fed and clad. Sleeps well in health, though by reason of his occupation he is unable to sleep more than 6 out of the 24 hours. Of a cheerful disposition.

Has resided at 14, College Street, Camden Town, for the last five years. The place is not naturally damp, but the slopping of the water makes it so, so that he has his feet frequently wet without being able to change. This, however, has not been more the case lately than before. He is generally constantly occupied during the season, work becoming afterwards more slack. This, however, has not been the case this year. He has been in London since 12th July, 1840.

Hereditary predisposition.—His father died at 70. During life he was liable to *gout* and rheumatism, not cough. His mother died at 50, "from oppression of the brain" and rheumatic fever. The other members of his family are healthy, except one sister, who is occasionally liable to coughs; but these are always slight.

Habitual state of health.—He himself has generally been healthy. He is not aware that he ever had small-pox, scarlet fever, or hooping cough; but he had measles when about five years old. It was a very severe attack, and he was not expected to live. He had not been particularly liable to coughs. Never had hæmoptysis or rheumatism before.

Present attack.—On Wednesday (the 15th) he first began to suffer with pain in the heel, which very much interfered with his walking. He therefore put his feet in mustard and water at night. On Thursday morning (16th) he felt much better, and the pain in his heel was much less, though it still continued. He was able to return to his work, and slept well that night. Up to this time he had not felt feverish. On Friday (the 17th), however, he was able to do his work, but very imperfectly, as he began to feel very chilly and uncomfortable, with a sensation of soreness all over his body, as if he had been beaten. He was very thirsty, and had no appetite. There was also pain at the chest, increased by a *deep inspiration* in and about the cardiac region. About half-past eight on Friday night he was obliged to leave off work and take to his bed. That night he was unable to sleep from restlessness and pain, but he was not light-headed, nor was there palpitation of the heart. In the morning (18th) he was better, but still felt very feverish and uncomfortable. The pain was more restricted to his knees, so that he was only able to hobble about the room. He managed, however, to go to a neighbouring medical gentleman, who gave him some medicine, which relieved only the pain in the chest. On the same night violent rigors came on, which shook him so much that he was unable to keep anything in his hands. He could not sleep that night by reason of the pain in the knees, which was severe, that about the heart being relieved. These were also both swollen and red. He perspired profusely that night, and he remarked the odour of his perspirations was very sour. In the morning, however, he seemed greatly relieved (19th), and felt better in health. He was able to get up, and actually went out and walked a distance of about three quarters of a mile. His appetite was much better, and he was able to take his dinner, and about Oss. of porter. About 3 P.M., however, he felt tired, and went to bed. As soon as he began to feel warm, the pains returned in his ankles, wrists, and elbows, knees, back, and chest, but he was not *light-headed*. That night the perspirations returned, but he could not sleep. He felt feverish and thirsty; but there were no rigors, until he was moved to another bed in another room. In this transit he was warmly covered, but rigors came on very severely immediately after. On Monday, the 21st, his medical attendant called, and gave him some medicine, which again relieved the chest. The next day, however, as the pain in the limbs continued, he was admitted in the hospital.

(The following are the notes on his "present state," as recorded by the clinical

clerk, with such additional particulars as could be collected from him, and the attendants in the ward):—

There is little if any increased heat of surface. He complains of pain in the cardiac region, and there is a slight murmur with the first sound heard loudest at the apex, heard feebly at the base, not in the carotids or top of sternum. Pulse is resisting, 80. The tongue is coated with a thick yellow fur. There is no appetite. Complexion and conjunctivas tinged yellow. There is no nausea or vomiting. Bowels costive. Urine scanty, high coloured; sp. grav. 1080, very acid, containing a slight cloud of lithates, albuminous, no excess of urea. It contains a large excess of bile. When first passed it is clear, almost of a burnt sienna colour, but after a time it becomes turbid from the presence of lithates. Head not affected. No palpitation at the heart. *Mittatur Sang.: opi C. C. ad 3xvj. regioni cordis. ℞ Calomel, gr. iv.; Opii, gr. j. fiat pil. post operat. sumend. ℞ Potass. Tart.; Tinct. Jalapæ, aa. ʒj.; Inf. Sennæ, ʒiss. fiat haust. horâ post pil. sum. Low diet. ℞ Calomel; Antim. Pot. Tart.; Opii, aa. gr. j. fiat pil. post operat. purgativi sumend. et 6a. q. q. h. repetend.*

May 22d.—The pain is much less; he perspires very much; has no palpitation at the heart. There is aching in the joints, but no actual pain. Pulse soft, regular. Tongue dry in the centre, moist at the edges; is still very thirsty. The blood drawn was both buffed and cupped, and the serum of a dirty yellow colour. *Pt. pil. 8a. q. q. h. tantum. ℞ Liq. Ammon. Ant. ʒss.; Potass. Nitratis, gr. xij.; Mist. Camph. ʒj. fiat haust. inter pil. sing. dos. sumend.*

24th.—He has more pain in the wrists, shoulders, and knees. The former are very tender. There is slight redness about them, and swelling. There is no swelling in the ankles, which are, however, very painful. *V. S. brachio ad 3xvj. Omitt. mist. ℞ Liq. Potassæ, ʒss.; Vin. Sem. Colchici, ʒss.; Aqua, ʒj. inter sing. dos. pil. sumend.*

26th.—On Saturday night, the 24th, he began to talk nonsense in his sleep, and was otherwise at times delirious. About 12 his heart began to palpitate severely, and so much so as to wake him from his sleep. This feeling, however, ceased in about one hour. Yesterday he complained a good deal of pain at the heart, and occasional palpitation. The pain was increased on external pressure, or on a deep inspiration. He was ordered, by Dr. Quain, a mustard poultice to the heart.

Present state.—The colour of surface generally is yellow. There is no eruption. He is not very thin, but spare looking. He

cannot lie on the left side, as it gives him pain about the heart. There is considerable pain in both wrists, knees, and ankles. The former are red and painful. In the knees, however, there is very considerable swelling. No rigors. Skin hot, but perfectly moist. He is sweating very profusely, and the odour of the perspirations is intensely sour. He feels very weak and tired; very restless, especially at night.

The expression of his countenance is very anxious. Cheeks sallow, of a yellow colour, bedewed with perspiration. There is no intolerance of light; pupils natural; conjunctivae of a yellow colour. Other senses unaffected. Has a bad taste in his mouth, which is dry and parched. No grinding of the teeth; some headache; no giddiness. Sleeps very little. Last night he was troubled with frightful dreams. Memory good; spirits low. No drowsiness. He cannot move his legs from the intensity of the pain. There is some tenderness across the loins.

Thoracic organs.—The right side of the chest moves more than the left. Percussion yields perhaps a somewhat duller sound under the left clavicle, and there is some large crepitation heard at this part. Respiration hurried; no cough or expectoration.

The impulse of the heart is increased. There is a distinct tremor felt over its surface. There is considerable pain about the heart, but it is chiefly referred to the lower ribs, and pressure from below gives him a good deal of pain. There is occasional palpitation. The cardiac dulness reaches as high as the third rib. Transversely, two and a half inches from the left border of the sternum. The sounds are somewhat muffled; not very distinct at the left side of the sternum; a *double friction sound* is distinctly heard. It is heard quite independently of the respiration; not heard in the neck. There is occasionally also a murmur with the first sound heard at the apex, but it is not always heard. It is not heard in the neck or at the top of the sternum. The cardiac dulness changes its position at least one and a half inches to each side, when he is made to turn on the side. The pain is increased on a deep inspiration. Pulse above 100.

Tongue is thickly furred and dry. Breath offensive; no sore throat or difficulty of deglutition. No appetite; very thirsty; no nausea. Bowels open. Liver reaches about one and a half inches lower than the margin of the ribs, and not higher than 6th rib. No enlargement of the spleen. No renal tenderness. Has made about 24 oz. of urine since last night; sp. gr. 1023, very acid, and of a very yellow colour; no excess of phosphates; some excess of urea

by the ecchymon test; no albumen. R. Calomel, gr. v.; Mias. Panis, gr. ij. ft. pil. quam primum sumend. Haust. purg. niger horâ post pil. sumend. Pergat in usu mist. addendo Vin. Senn. Colch. qv. sing. dos.

27th.—He is still perspiring profusely; odour very sour. No headache or giddiness. Slept very badly. There is still considerable pain on pressure beneath the lower ribs; occasional palpitation. Pulse softer, more compressible. The impulse of the heart is more extended to-day, and an undulatory movement of the walls of the chest upon the cardiac region is also perceptible most distinctly in the intercostal spaces. The cardiac dulness is increased, especially in a transverse direction. At the apex the sounds of the heart are very feeble; the loud double friction sound, however, persists. It is perhaps less loud than yesterday, but more generally heard. It is heard most distinctly just below the mamma. The respiration is still mixed; mucous rchus under the right clavicle. Tongue still covered with a thick yellow fur. Bowels open freely. Admoveantur Hirudines x. regioni cordis. Pt. in usu. mist. addendo Liquoris Botani, ℞x.; et Vin. Colchici, ℞v. a. d. Pt. pil.

29th.—There is chiefly pain to-day in the right hand, in the joints and fingers of the wrist. In the left hand the pain is very trifling. The knees and ankles are greatly improved; there is still, however, a little effusion, but the pain is greatly diminished. He sweats a good deal during the night, and the odour of his perspirations continues very sour. Face is improved, less yellow; the conjunctivae, however, are still tinged with bile. No headache or giddiness. Sleeps better. The intellect is quite clear. No pain across the loins. There is some pain on pressure still between the intercostal opposite the cardiac region, but none from below the ribs. Still some pain to-day when he coughs, takes a long breath, or lies on his left side. The friction sound is not heard behind, and it is much less loud in front; cardiac dulness is slightly increased, reaching as high as the top of the third rib, superiorly and transversely, three inches. Appetite improving. Bowels freely opened. His mouth is distinctly sore, with mercurial fetor present. Admoveant. Hirudines x. regioni cordis; Pt. mist. addendo Pot. Liqurioris, ℞v. a. d. Sumat. pil. nocte maneque tantum.

30th.—He has slept very badly last night, the bowels being much griped. He still continues to perspire profusely. No friction sound heard. The mitral murmur heard before is distinctly more audible. Cardiac dulness reaches three inches transversely, beginning at the left border of the

sternum. There is still some pain when he takes a long breath or lies on the left side. On percussion the left side is duller than the right beneath the clavicle, and the respiration is harsh and interrupted on the left side. There is still a little large crepitation heard on the right side. Behind left supraspinous fossa still duller than right. The respiration is weak under both clavicles; expiration proportionally too loud under the left. The heart sounds are heard very distinctly under left clavicle.

31st.—Cardiac dulness has diminished fully one inch transversely, superiorly as high as the 4th rib. Transversely, it measures only two inches. The mitral murmur, with the systole, is less distinct, but at the base and also at top of the sternum there is a slight murmur heard with the first sound; also a slight friction, sound. He perspired a good deal last night; indeed, so much so as to wet his sheets quite through. The tongue is still covered with a thick brown fur posteriorly; clear at the edges and dry. Bowels open three times last night. His mouth is very sore, with strong mercurial fetor in the breath. The right wrist to-day is again swollen and red. The knees last night were very painful, but are not red or painful now. There is some slight pain in the shoulder. Pulse 92; much more compressible. *Admoveantur Hirudines, iij. corpo dextro. Pt. in usu pil. addendo Pulv. Opii, gr. ss. sed sumat nocte tantum. Pergat in usu mist. addendo Potass. Liquoris, ℥jv.; Potass. Iodidi, gr. iv. sing. dos.*

June 2d.—He is a great deal better to-day. Right wrist scarcely painful; much less swollen and red. Still perspiring copiously. Face looks thin. Right pupil is rather more dilated than left, but the eyesight is equally good in both eyes. No headache. He sleeps well; but, immediately before he goes to sleep, he is troubled with jumpings and twitchings of the limbs. Cardiac dulness the same as yesterday. Apex freely moveable. Seems to beat between the fifth and sixth ribs, and two inches externally or internally, according as he lies on the left or right side. There is no mitral murmur heard at all, but there is a loud systolic murmur at the base, heard also in the neck and the top of the sternum. It is heard most distinctly on the fourth rib, one inch external to the sternum. He cannot lie on his left side without pain. Mouth still sore, whitish, very moist, cleaving, brown posteriorly. No sickness. Appetite very trifling. There is some slight cough to-day.

3d.—The cardiac dulness is again increased to-day, reaching transversely, beginning at the middle line of the sternum, to

from the fifth to the seventh ribs. The left side still duller beneath the clavicles than the right. The other symptoms as before. No difference in the vocal vibrations of both sides. No pains in the joints, except a slight dull pain in the right shoulder. Does not perspire so much as he did. Skin moist. Appetite improving. Tongue cleaning. Pulse 90; soft and compressible. To have rice-milk daily.

4th.—Cardiac dulness is still increased: transversely extends four and a half inches, beginning at the right border of sternum; longitudinally, five inches from the fourth to the sixth ribs. Systolic murmur at the base persists, though it is scarcely so loud; heard at top of the sternum, faintly in the neck. No pain at present on a deep inspiration, or when he lies on the left side. Pulse 92. Perspired rather more last night. The right knee is a little painful, red, and swollen. No pain in the shoulder except when he moves it. Bowels open twice. Mouth very sore, so that he cannot eat anything, though his appetite is much improved.

5th.—Continues much about the same. There is still pain across the shoulders, but only when he moves the arm. Cardiac dulness is diminishing; it begins at the left border of the sternum, reaching only three and a half inches; superiorly, as high as the fourth rib. Its extent inferiorly could not be determined, as the examination was made after dinner. Bowels twice open. No sickness. Tongue less congested, still furred. Pulse 88; soft and full. Mouth still very sore. Some aphthous spots on the inner side of the right cheek. Sleeps very well.

6th.—Heart measures transversely three and a quarter inches; does not reach higher than fourth rib; no murmur heard at apex; aortic murmur persists, but is much fainter. Bowels freely open; motions very light-coloured and offensive. Appetite very good. Mouth continues very sore.

7th.—Continues to improve. Mouth is better. Tongue cleaning. Cardiac dulness is much diminished. Pulse 104; quite compressible. *℞ Omite pil. et mist. ℞ Pot. Iodidi, gr. viij.; Liqueoris Potassae, ʒss.; Inf. Gentian, ʒss. bis die. ℞ Plumbi Acet. ʒss.; Acet. destill. ʒij.; Aqua, ʒvss. fiat lotio subinde pro ore utend.*

9th.—He is altogether greatly improved. Aortic murmur is fainter. Cardiac dulness reaches transversely only two and a half inches; reaches as high as fourth rib. Liver reaches a finger below the margin of the ribs. Pulse 104; soft and compressible. Bowels open.

10th.—Tongue is rather brown on each

side, but moist and cleaning. Cardiac dullness only reaches one and three-quarter inches transversely; the same longitudinally. Appetite greatly improved. Mouth much better. Omitte Mist. R. Inf. Calumbæ, ʒiiss.; Vin. Sem. Colch. ʒxxv.; Tr. Camph. co. ʒj. bis die. Full diet.

17th.—Since last report he has been improving daily in appearance and strength. To-day he has no pain anywhere. His bowels have been a little griped yesterday and to-day, but this he attributes to having eaten some meat which was not quite fresh. There is occasionally a feeling of uneasiness at the heart, not, however, increased by a long inspiration or cough. There is no palpitation. Cardiac dullness reaches as high as the fourth rib. The impulse is in-

creased, so as to be felt even to the lower border of sixth rib, to which point the dullness extends inferiorly. Transversely, it reaches to-day 2½ inches, which is more than it has been by one-eighth for the last week. Aortic murmur is still heard faintly at the base and top of sternum, and neck. Liver reaches as high as sixth rib; does not extend below the ribs, except at the epigastrium. Longitudinally, it may be traced nearly to the apex of the heart, measuring five and a half inches. The resonance under both clavicles is the same. Behind the right supra-spinous fossa is somewhat duller. Respiration weak; otherwise healthy. Pulse in the semi-erect position; 120, weak. Bowels open. Discharged cured.

State of Urine.

Date.	Lithates, &c.	Albumen.	Sp. gr.	Quantity passed in 24 hours.	Diet.	Microscopical characters.	Quantity of solid matter excreted in 24 hours.
May 21	Very acid; much; with bile.	Some.	1030	—	Low.		
" 24	Do.	Do.	1027	24	—		753 gr.
" 26	Do.	None.	1023	24	—	Epithelium scales in abundance.	643
" 27	Do.	Do.	1020	13	—	Lithates.	296
" 29	Very acid; lithates; no bile.	Do.	1017	52	Weak broth.		1003
" 30	Do.	Do.	1021	28	—	Crystals of triple phosphate.	569
" 31	Slightly acid; lithates.	Do.	1021	—	—	Lithates.	—
June 2	Very acid; lithates.	None.	1023	28	—		750
" 3	Do.	Do.	1018	28	Rice-milk.		568
" 4	Slightly acid.	Do.	1018-23	34	—	Triple phosphate and chloride of sodium.	—
" 5	Do.	Do.	1021	30	—		717
" 6	Do.	Do.	1020	24	—		547
" 7	Do.	Do.	1012	54	—		734
" 9	Do.	Do.	1016	46	—		832
" 10	Do.	Do.	1017	24 saved.	Full.		—
" 11	Do.	Do.	1018	34	—		686
" 12	Do.	Do.	1015	30	—	Crystals of oxalate of lime; epithelium particles.	510
" 13	Do.	Do.	1016	32	—		579
" 14	Do.	Do.	1016	28	—		506
" 16	Do.	Do.	1015	28	—		476
" 17	Do.	Do.	1012	25 saved.	—		—

[To be continued.]

Correspondence.

TREATMENT OF DYSENTERY IN THE WEST INDIES.

SIR,—I am averse to trouble you with dry details of cases,—they are so little interesting to the general reader,—but that excellent address by Mr. Critchett, in your number of the 5th instant, induces me to enclose you another case of dysentery. That and the last were originally marked No. 1 and No. 2, but as the former found a better place under "Infantile Pulmonary Disease," so may this possibly under the subject of the address referred to. It may be observed no mention is made of venesection or leeches. The reason is, I have for many years past avoided even the local abstraction of blood in dysentery, when complicated with remittent fever, or in strumous constitutions, and the practice is certainly sound.*

The rapid clearing of the cornea in this case with the return of health, or freedom from fever, is particularly instructive, as indicative of a similar process, most probably, going on in the mucous membrane of the colon.

In explanation, I may mention, when quinine is exhibited, I prefer giving the whole amount in the forenoon, and when there is any febrile excitement some saline diaphoretic mixture in the afternoon, alternating both with medicines directed to the local disease.—Believe me,

Very truly yours,
R. H. A. HUNTER,
Staff-Surgeon.

Bristol, 12th April, 1850.

Thos. O'Neil, *æt.* 20. Phlegmatic temperament. One year in the West Indies. Admitted 16th Jan., 1849. *Vesp.*—Complains of frequent ineffectual calls to stool, of twenty-four hours' standing. Feels chilly, but covered parts hot and dry. Pulse 96.—Calomel, *gr.* xx. c. Opium, *gr.* ij.

(Having different times experienced the soothing effects of this, and the very reverse of small doses, we are almost afraid in dysentery to prescribe less. These doses, however, are only suited to the earlier stages, for when further advanced, or the constitutional powers low, we are convinced that a quantity of the bichloride is formed in the bowels occasionally. The blue pill, with opium, is then, however, a good substitute; or, where bulk is no objection, Hyd. c. Creta, et Pulv. Dover.)

* See Annual Report, "Queen's Royal," in Bombay Medical and Physical Transactions, No. V.

17th, 7 A.M.—Griped, and passing blood. Skin hot. Tongue dry and rough. Pulse 96.—Solut. Sulph. Magnes. $\frac{3j}{ij}$. 2da quaque hora. *Vesp.* 6 P.M.—Skin hot, dry. Pulse 96.—Cal. *gr.* x. c. Opium, *gr.* j. h. s. Mist. Acet. Ammon. Sisa q. q. h.

18th.—Motions very frequent, and altogether bloody mucus. Hypogast. thin, and plus resonant. Skin hot. Pulse 84.—Ol. Ricini. $\frac{3j}{ij}$. c. Tinct. Opium, *gr.* xv.; Pil. Hydrarg. *gr.* iij. c. Ipecac. *gr.* j. et Opium, *gr.* ss. Sisa q. q. h. *Vesp.*—Motions still frequent, scanty and bloody, with much tenesmus. Skin hot. Pulse 84, with a slight vibration.—Hyd. c. Cret. et Pulv. Dover, aa. *gr.* x. h. s.

(Vibration, as well as the frequency of the pulse, is a most important prognostic in dysentery. The latter, however, must be ascertained with the greatest care, morning and evening, and noted, as a few pulsations may make all the difference. It is too common to look upon the pulse as of minor import, or even as a "res fallacissima," but we should put no faith in the diagnosis or prognosis formed without it. (Connected with this subject might we propound a question for obstetricians—What difference is there in the number of pulsations in the male and female antecedently to birth? Our practice has been chiefly "hospital," but too limited to determine the point: 128 to 134 for the male, 136 to 144 for the female, would accord with our experience.)

19th.—Frequent thin muddy motions during the night, with here and there bloody mucus. Skin less hot. Tongue thickly loaded. Urine free. Pulse 96. Hypogastric region plus resonant, and rather tender.—Ol. Ricini, $\frac{3j}{ij}$. c. Tinct. Opium, *gr.* xv. Cont. Pil. et Mist. invicem, 2dis horis. *Vesp.*—Motions less frequent, but still much tenesmus, and large quantities of bloody mucus. Skin hot. Pulse 104.

(The thinness and tenderness of hypogastrium is another most important prognostic in dysentery. In cases tending to a fatal termination it feels as if there was only a thin tense membrane interposed on percussion. This, no doubt, depends upon a similar cause to that of the bulging of the intercostal spaces in empyema).

20th.—Dejections less frequent, but resemble bloody water. Gums sore. Skin warm. Tongue much loaded, moist. Pulse 92. Left eye very vascular, and old specks visible on cornea.—Solut. Quinae, $\frac{3j}{ij}$. (*gr.* ij.) *ter* die. Mist. Cret. c. Catechu et Opium post sing. deject. liquid. Collyria, p. r. n. *Vesp.*—Skin hot, dry. Pulse 104.—Pulv. Dover, *gr.* x. h. s.

21st.—Motions feculent. Feels very weak. Arms and body moderately warm. Face covered with perspiration. Pulse 88.

Left cornea nebulous.—Purgat. *Vesp.*—Up twelve times. Much bloody mucus in vessel. Skin warm. Tongue loaded, moist. Pulse 96.—Pulv. Doveri, gr. xv. h. s.

22d.—Better last night, but motions still frequent, with much thin bloody mucus. Skin hot, dry. Pulse 92.—Sulph. Quinae, gr. vi.; Tinct. Cinchon. ʒj.; Aq. ʒv.; Cajuas, ʒij. ter die. Cont. Mist. Astringens. *Vesp.*—More tenesmus. Skin hot, dry. Pulse 98.

23d.—Asleep on right side, with face bathed in perspiration. Skin cool, moist. Pulse 86. Cont. omnia ut heri. *Vesp.*—Dysenteric symptoms the same. Skiz of abdomen dry, burning. Pulse 86.

24th.—Dejections less frequent, and more feculent, but cornea very nebulous. Skin cool.—Purgat.

25th.—Dejections still frequent, but appearance vastly improved. Abdomen thin, but cool and soft. Pulse 76.—Cont. Quinae. *Vesp.*—Griped all day. Skin hot, dry. Pulse 100.—Pul. Hyd. et Opii, et Mist. Acet. Ammon. ut antea.

26th.—Left cornea densely nebulous, and dysenteric symptoms still urgent. Skin cool, soft. Pulse 78.—Hyd. c. Cret. et Pulv. Doveri, aa. gr. v. et Mist. Quinae invicem, 2dis horis. *Vesp.*—Skin hot. Pulse 108.—Pul. et Mist. Ammon. Acet.

(Pulse 100, 108, 108, three evenings in succession, marked a very critical period of the disease. We almost despaired then of him, for a further rise was fully anticipated; but the following evening 100, and the next 88, was as life from the dead.)

27th.—Only three dejections, but still mucous and bloody. Skin cool. Tongue loaded, moist. Pulse 80. Left cornea nearly opaque.—Empl. Lyttae poster. auris. Solut. Quinae, ʒij. (gr. ij.) 2dis q. q. h. usque ad 4am vicem, dein Hyd. c. Cret. c. Pulv. Doveri, ut heri. *Vesp.*—Skin scarcely so hot as last evening. Pulse 108.

28th.—Eight dejections, scanty, but normal; also a quantity of separate bloody mucus in vessel. Mercurial fector. Skin cool. Pulse 76.—Solut. Quinae, ʒij. et Mist. Sequent. ʒij. invicem, 2dis horis. Mist. Cret. ʒij.; Aq. ʒvi.; Tinct. Kino et Catechu, aa. ʒvj.; Opii Tinct. gr. ʒiv. *Vesp.*—Only five motions. Skin hot. Pulse 100.—Int. Quinae nocte.

29th.—Not up all night. Skin dry, scarcely hot. Pulse 89.—Rept. Med. ut heri. *Vesp.*—Rather purged. Skin cool. Pulse 89.

30th.—Purged several times. Motions thin, but feculent. Skin cool. Pulse 86.—Purgat.

31st.—Only one motion. Skin cool. Pulse 72.—Rept. Empl. Lyttae. Cont. Quinae et Mist. Astringens.

February 1st.—Frequent bloody slimy motions during the night. Tongue nearly clean, and quite moist. Pulse 72. Cornea clearing.

2d.—Five motions, feculent, but with separate masses of bloody mucus. Skin cool. Tongue clean, moist. Pulse 68. *Vesp.*—Skin quite cool. Pulse 80.—Purgat.

5th.—Again purged last evening, but not in the night. Skin cool, moist. Pulse 64. Cornea clearing.—ʒ Sulph. Quinae, gr. ix.; Tinct. Cinchon. ʒiv.; Gentian. ʒij.; Opii Tinct. ʒij.; Aq. ʒviii. M. ʒj. 4dis q. q. h. caeteris detractis.

6th.—Skin cool. Pulse 56.

7th.—Convalescent.

14th, *Vesp.*—Headache all day. Skin hot, dry. Pulse 92. Bowels had been relaxed, but not moved to-day.—Mist. Acet. Ammon. ʒiv. 3ia q. q. h.

15th.—Skin still hot and dry. Tongue loaded, moist. Bowels moved once. Pulse 88.—Solut. Quinae, ʒij. (gr. ij.) 2da q. q. h. usque ad 4tam vicem, dein Mist. Acet. Ammon. ut heri. *Vesp.*—Has been sweating, but skin still hot. Pulse 92.

16th.—Has slept well. Skin cool. Pulse 74.—Cont. Quinae, et capiat post singulas dejectiones liquidas Mist. Cret. ut antea, ʒiv. *Vesp.*—Again a little febrile excitement.

17th.—Skin quite cool. Pulse 68.—Solut. Quinae, quatuor in dies.

23d.—Feels quite well, and anxious to go out. Cornea, except only the old specks, quite clear.

Discharged, and not re-admitted.*

R. H. A. HUNTER,
Staff-Surgeon.

St. Vincent, 1st April, 1849.

THE ROYAL COLLEGE OF PHYSICIANS, LONDON, AND THE TITLES AND PRIVILEGES OF THEIR LICENTIATES AND EXTRA-DICENTILIATES.

SIR,—Among the several discrepant opinions at present entertained about the peltity of our profession, and the powers and privileges of its members of all classes, it is not one of the least remarkable,—the difference that exists between the leading article of your last number and that of your contemporary, the *Medical Times*, on the subject of the Royal College of Physicians being empowered, or not, to grant the title of M.D., or Doctor of Medicine, along with their license, *intra et extra urbem*, irrespective of any university degree or diploma previously possessed by the candidate. This is such an important

* See Annual Report from St. Vincent, in the *MEDICAL GAZETTE* of July last, where the case is referred to.

question that it is surprising that there should be any doubt about the College having such an authority, either declared or implied by any statute which they hold. The settlement of this question must be of vast interest to all candidates for honours, as well as for privileges, in the profession: for if the fact be as you state the case, it will save candidates for either of the licences a great deal of trouble, some study, (?) and much expense, if they can be invested with the title of *Medicine Doctor* at the same time, and by the same instrument, by which the license is obtained. It will also be a happy consideration for many students and practitioners in the provinces who, I am inclined to think, have no idea of such advantages being in their power to obtain, providing they have the other requisites qualifying them for candidates for the license.

It has been generally considered that the title of M.D. is an academic honour, only granted by some constituted university, though that of *Physician* may be, and has been, bestowed without any academic degree or ordeal upon certain eminent members of the profession. The Bishops of London in the time of Henry VIII. had and exercised the power of licensing certain persons to practise as physicians; and several talented and worthy medical officers in the army and navy of late years have been honoured with the rank and emoluments of physicians in the public services, though they possessed no degree or diploma of M.D.,—government wisely judging and exercising the power of granting honours and rank to those of their medical servants who were either distinguished for their talents or from their length of service, without assuming to confer any academical title of M.D. upon them.

In referring to the fundamental charter of the Royal College of Physicians (14 and 15 Henry VIII. c. v.) we find no mention of any other power granted to them but to license, or grant permission to exercise *facultatem medicine*, without any mention of the degree or diploma of *Doctor Medicinæ* being either prerequisites previously on the part of the *permissi*, or of having been *facto* granted by the license; the only relative notice is, the supervision and correction of *medicorum adveniarum facultate medicine*. It is only in the regulations issued by the College in 1888, that we first find mention made of the word *diploma*, which, in its ordinary acceptation, implies something more honorary than a mere license or liberty.

... that "the College

possesses within itself the means of conferring the rank and privileges of physicians on all who"—and "that it is prepared to regard in the same light, and address by the same appellation, all who have obtained the diploma, whether they have graduated elsewhere or not."

Now, this declaration surely implies that the College claims the power of not only granting a license, but also a *diploma* inferring *graduation*, though they nowhere mention a doctor's degree in medicine, but only physicians, with whose rank and privileges they have to do. For powers therein conferred, they, indeed, refer to the authority committed to them, "*Domino Rege et Parlamento*," but do not state where the statute or act granting such authority is to be found.

To avoid all misgivings on this important subject, it would surely be very desirable that the College should formally make the juniors of the profession, at least, acquainted whether the Royal College of Physicians "confers on their licentiates and extra-licentiates the title of M.D. according to the terms of their diplomas," or whether "its licentiates and extra-licentiates have no more right to the title of M.D. than have the licentiates of the Apothecaries' Company, or the licentiates of the Pharmaceutical Society."

Yours truly,

M.D.,

and Licentiate of the Royal College
of Physicians, London.

Manchester, April 30, 1880.

. Our view of the matter at issue has been already plainly stated. Has the College of Physicians, or has it not, the power of granting to its licentiates such a *diploma* as that which is now invariably issued?

In looking to the Charter of the College we find nothing prohibitory of, or inconsistent with, the exercise of such a power. The diploma distinctly confers, not only a license to practise, but a right to teach *medicine*, with the full *titles* and *privileges* which are elsewhere conceded to those who practise and teach medicine. They, therefore, who think that licentiates of the Royal College of Physicians are merely qualified to practise medicine, and not to teach it, should attack the legality of the diploma, which, beyond doubt, justifies the taking of the title M.D.; for this is the title under which physicians created by universities are elsewhere known (*hic vel alibi medicis concedi solent*). Unless the

term "*medicis*" refer to graduates of Universities, and the term, "*titulus et privilegium*," refer to the title of M.D. and Doctor of Medicine, to what class of persons, and to what titles and privileges, can the words be applied? The simple question, therefore, is—Can the College issue such a diploma to its licentiates, or can it not? We are prepared to join issue in the affirmative—i. e. to contend that the College has not exceeded the powers conferred by the Charter; and that the declaration made in 1838 is consistent with law and common sense. It renders the purchase of a German or any other university parchment unnecessary, but it leaves it open to every licentiate to add to his College license any fairly earned University honours. The declaration of the College, quoted by our correspondent, renders any answer to the remarks published in a contemporary journal wholly unnecessary.

Medical Intelligence.

THE VACCINE REPORT FOR 1850. SMALL-POX IN ENGLAND.

THE report of the Registrar-General for 1845 is adduced in support of the efficacy of vaccination. The registrar remarks in this report that few of the victims of small-pox had been vaccinated, and that in one city, Norwich, between 200 and 300 persons were allowed to perish through the negligence of their parents in failing to avail themselves of the protection discovered by Jenner and placed at their disposal by the Legislature. It is complained that through the inattention of the public sufficient statistical returns are wanting, notwithstanding repeated requests, to enable the board to judge accurately of the extent of vaccination in the united kingdom. A report to the Poor Law Commissioners is referred to, however, in confirmation of what they have advanced, from which it appears that, taking 627 unions and parishes in England and Wales, in the year ending September, 1848, the number of persons under one year who were vaccinated, exclusive of those vaccinated at the cost of their parents, amounted to no more than 83 per cent. of the total births registered in the same period. Finally, attention is drawn to the absence of efficient measures of medical police calculated to check the progress, or,

if possible, extinguish this fatal disease, and especial notice is called to the fact "that the contagion, in a vast majority of instances, is carried throughout this country by the wandering Irish, it being feared that no care, however great, can be successful in eradicating small-pox, whilst the neglect of vaccination and the practice of variolous inoculation are permitted in Ireland." The report concludes by a reference to the more rapid progress of vaccination in foreign countries, owing to the municipal measures or legislative enactments there adopted to promote its dissemination, urging that unless a similar course be followed in England it can never hope to be freed from its frightful scourge.

MORTALITY OF THE FIRST QUARTER OF 1850.

THE sanification of our cities is a great heroic work, and may, perhaps, yet be achieved before the present generation has passed away. The annual rate of mortality in the first quarters of the 11 years 1840-50 was 2·754 per cent., in 117 districts, comprising the chief towns; and 2·222 per cent. in the districts of small towns and country parishes; in 1850, the mortality in the first class of districts fell to 2·401 per cent., and in the second class of districts, to 2·067 per cent. In the most favourable winter quarter which has been experienced since 1846, the mortality of the inhabitants of towns exceeds the mortality of the rest of the country by 16 per cent. The 144,602 births exceeded the 98,607 deaths in the quarter by 45,995.—*Reg. Gen. Report.*

CHOLERA AND SMALL-POX IN CALCUTTA.

THE Indian papers state that the small-pox and cholera have occasioned great mortality at Calcutta. It is a singular proof of the utter indifference to human life which is characteristic of the East, that an epidemic whose ravages would throw London into consternation has scarcely been noticed, even in the public journals. Estimating the destruction caused by the small-pox at 400 a week, which we believe to be under the truth, the number of deaths in the British metropolis would be—allowing for the difference of population—2,800 a week, and we need not say that such an entry in the bills of mortality would throw the population of London into a frenzy of terror.

UNUSUAL LENGTH OF UMBILICAL CORD.

DR. NEUGHBAAER relates a case in which he found the cord six times twisted round the body of a child. Its entire length was sixty-seven inches and three quarters.—*Casper's Wochenschrift*, 1849. x

UNIVERSITY OF OXFORD, GRADUATES OF MEDICINE.

It is hereby notified to students of medicine who purpose to offer themselves as candidates for the degree of Bachelor in that faculty, that the next examination will be holden on Tuesday, June 4th. Candidates are requested to transmit to the Clinical Professor of Medicine (Dr. Ogle, 63, St. Giles's Street, Oxford) the usual certificates of their having complied with the requisitions of the Statute, Tit. VI. sect. 5 §§ 1.3., on or before Monday, the 20th inst.

UNIVERSITY COLLEGE—RESIGNATION OF MR. ARNOTT.

MR. ARNOTT has resigned the office of Professor of Surgery at University College, and of Surgeon to University College Hospital.

UNIVERSITY COLLEGE, LONDON—APPOINTMENT.

THE Council, at their session, on Saturday last, appointed Mr. Edward J. Chapman to the Professorship of Mineralogy, recently instituted by them.

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 3d instant:—T. Ward—J. B. Scriven—E. B. Dorman—W. M. G. Hewitt—H. S. Johnson—M. Davies—W. H. Arthur—C. J. R. Watts—J. Young.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, the 2d of May:—John Latimer Parke, Derbyshire—Augustus Dimock—Frederic Hezekiah Hartshorne, Broseley, Salop—John Furse, Southmolton, Devon—William Michill Clarke, Bodmin, Cornwall—Cornelius Hanbury, jun., Stoke Newington—James M'Carthy, Romford, Essex—Thomas Allin Haigh, Honley, near Huddersfield—Henry Strangways Hounsell, Bridport, Dorset—John Smith Wills, Axminster, Devon.

OBITUARY.

M. DE BLAINVILLE.

WE have to record the death of this eminent naturalist, who was the successor of Cuvier in the chair of Natural History in Paris. He was in his 72d year. It appears that until within a few days of his death he had enjoyed very good health. The deceased was found dead in a railway carriage, while on a journey from Paris to Caen.

MR. HENRY MARTIN.

Recently, at Haverhill, Suffolk, Mr. Henry Martin, in the 51st year of his age. The deceased was greatly respected in his neighbourhood.

Selections from Journals.

CASE OF POISONING BY METALLIC ARSENIC. BY B. SILLIMAN, JUN., M.D., PROFESSOR OF CHEMISTRY, ETC., IN THE UNIVERSITY OF LOUISVILLE.

THE man had been unwell for some days with symptoms supposed to be occasioned by simple derangement of the bowels, accompanied by nausea and vomiting. The medical attendant was called on Thursday evening, Aug. 30, and found the patient in bed. He complained of nausea, thirst, and constant distress at the stomach, and pain in his bowels; pulse feeble and irregular; his hands cold. He was treated with Hopkin's elixir, followed by Dover's powders, camphor, gum, and sudorifics. The following day he appeared easier, and was in a perspiration. Still complaining of his stomach, an emetic was administered of Antim. Tart. grs. ij., Pulv. Ipecac. grs. xx.; which, failing to act, was repeated—each in three doses. He was not seen again until nine o'clock on Friday night, when he was in a state of collapse, with great distress in the stomach and great difficulty of breathing; pulse not perceptible; hands and feet cold and livid. He complained of extreme heat in the pit of his stomach, and conversed with difficulty; had a constant disposition to vomit, general twitching of the muscular system, and frequent alvine discharges; countenance pallid; skin cold, and bedewed with a clammy sweat. Diffusible stimulants were administered, and he died about midnight following, say thirty-six to forty hours from the time he was first seen by a medical attendant.

The autopsy detected nothing remarkable in the upper viscera. The stomach, however, showed distinct marks of inflammation by a medial ring of vermilion red extending around it: below—say three-fourths of the organ—was dark, nearly black, coloured; the upper portion healthy. It does not appear that the alimentary canal was examined. The appearance of the stomach, which had been preserved in alcohol, was fresh, no change or decomposition having taken place; nevertheless it appeared of a livid and unnatural colour. A strong horizontal line divided it into two equal portions; the lower portion being dark, the upper opaque and not unnatural in its appearance. The stomach was opened by a long incision, and its interior exposed. Its internal appearance was strikingly unhealthy, livid and inflamed, resembling the effects of acute gastritis. Its contents appeared singularly unnatural, being not less in quantity than one pint of dark coloured,

brownish fluid, thick, and resembling in colour and appearance rich chocolate. The line of division already spoken of was not so apparent on the interior as on the exterior. The whole interior surface presented strong evidence of inflammation; the colour was livid, with lines of extravasated blood. The mucous coat was lined with the chocolate-coloured matter before mentioned. There was no trace of food in the stomach, save a few filaments of reddish matter resembling the skins of tomatoes.

Arsenic was readily detected in the stomach, both in the metallic state and in a soluble form. The deceased had probably swallowed the substance called *fly powder*, but the circumstances under which the poison was procured and taken are not stated in the report.—*British American Journal*, p. 298, March 1850.

RUPTURE OF THE LUNG.

doubtful whether the wheel had actually passed over him or not. There was no external injury; the boy remained in a state of collapse, and died at the expiration of about A. boy was injured on a railroad, it being three hours. At the autopsy no fracture of the ribs was discovered, but the pleural cavity contained a large quantity of blood, proceeding from a rupture of the lower part of the lung, presenting the appearance as if cut with a knife.—*American Journal of Med. Sciences*, Jan. 1850.

BOOKS & PERIODICALS RECEIVED

DURING THE WEEK.

A Practical Handbook of Medical Chemistry. By John E. Bowman, Demonstrator of Chemistry in King's College.

A Manual of Elementary Chemistry, Theoretical and Practical. By George Fownes, F.R.S. &c. 3d Edition.

The Chrono-thermist. No. 3. May.

Journal de Chimie Médicale. Mai 1850.

The American Journal of Medical Sciences. April 1850.

Report of the Pennsylvania Hospital for the Insane for the Year 1849.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, May 4.

BIRTHS.	DEATHS.
Males.... 718	Males.... 419
Females... 728	Females... 440
1446	859

CAUSES OF DEATH.

ALL CAUSES	829
SPECIFIED CAUSES	686
1. <i>Epidemic (or Epidemic, Endemic, Contagious) Diseases</i>	159
<i>Sporadic Diseases, viz.—</i>	
1. Dropsy, Cancer, &c.	39
2. Brain, Spinal Marrow, Nerves, and Senses	168
4. Heart and Bloodvessels	48
5. Lungs and organs of Respiration	128
6. Stomach, Liver, &c.	45
7. Diseases of the Kidneys, &c.	9
8. Childbirth, Diseases of Uterus, &c.	7
9. Rheumatism, Diseases of Bones, Joints, &c.	8
10. Skin	1
11. Old Age	20
12. Sudden Deaths	10
13. Violence, Privation, Cold, &c.	51

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox	7	Convulsions	28
Measles	17	Bronchitis	44
Scarlatina	17	Pneumonia	65
Whooping-cough	36	Phthisis	102
Diarrhoea	10	Lungs	12
Cholera	0	Teething	6
Typhus	28	Stomach	8
Dropsy	4	Liver	11
Hydrocephalus	24	Childbirth	2
Apoplexy	30	Uterus	4
Paralysis	18		

REMARKS.—The total number of deaths was 54 below the average mortality of the nineteenth week of the six previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer	30.04
" " Thermometer	45.5
Self-registering do. Max. 9.0 Min. 15°	

* From 12 observations daily. b Sum.

RAIN, in inches, 71.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 9° below the mean of the month.

NOTICES TO CORRESPONDENTS.

We are unable to find room in the body of the Journal for the Notes of the prisoners at the different schools.

We have to inform a purchaser that Dr. Pereira's second volume is considerably advanced; but it is impossible at present to fix the date of its publication.

Dr. Jamieson's second lecture has come to hand. Mr. G. F. Hodgson's very curious case of Feigned Disease shall appear next week.

RECEIVED.—Zeta—Dr. Day.

CORRECTIONS.—In the last number, p. 753, col. 2, line 17 from top, for "is," read "it."—In the leading article, page 766, col. 2, line 2 from top, for "do," read "doen."

Notice.—We have to request that all ADVERTISEMENTS may be addressed directly to MESSRS. LONGMAN AND CO. Paternoster Row, and marked on the outside "ADVERTISEMENT." Great delay in the insertion has arisen from their having been addressed to the EDITOR of the Journal.

Lectures.

THE

LUMLEIAN LECTURES FOR 1850.

Delivered at the Royal College of Physicians.

By R. B. TODD, M.D. F.R.S.

ON THE PATHOLOGY AND TREATMENT OF
DELIRIUM AND COMA.

LECTURE II.—(Concluded.)

To the state of hysterical coma we must refer that remarkable condition which may be produced in some hysterical women, and in men and lads of similar habit, which is called the mesmeric sleep—a state in which consciousness may be wholly destroyed, and a complete coma produced—or in which a half consciousness remains, accompanied by more or less of a delirious state, in which the patient may exhibit those phenomena, and perform those strange feats of second sight, or *clairvoyance*, which have so much delighted the lovers of the marvellous. As the ordinary hysterical coma may disappear rapidly, so will this also under favourable circumstances; whilst at other times the comatose condition remains for some time, and only gradually subsides. The best proof that the so-called mesmeric state is no more than what one may call an *artificial hysterical coma*, consists in the fact that all the phenomena of it will sometimes manifest themselves spontaneously, without any apparent exciting cause; at least without any cause such as can be regarded as a mysterious influence acting from one individual to another.

On the second of April, 1843, a boy, Alfred Russon, æt. 16, was brought into King's College Hospital in a state of what I must call *hysterical coma*, or, to connect it with phenomena otherwise produced, mesmeric coma. The only history we could obtain of him was that he had, about two o'clock in the morning, walked into a coffee-shop in Drury Lane, where he was found sitting in one of the boxes, speechless and insensible. He was handed over to the police, by whom he was brought to the hospital. The house-physician found him sitting erect on a chair, his eyes widely open and motionless, pupils dilated, and presenting an undulating motion when the candle was placed near them; conjunctivæ rather injected; countenance expressive of astonishment; respiration easy, although a little quicker than it ought to be; power of deglutition perfect; no spasm or twitch-

ing of any single muscle. The most remarkable feature was his utter insensibility to every external impression; even the roughest treatment produced no effect upon him; the splashing of cold water, shaking, pinching, shouting in his ears, seemed to make no impression. He had walked into the hospital between two policemen: whilst in the surgery of the hospital he never altered his position in the slightest degree; and after having been examined in the surgery, he walked up stairs to his ward without dragging his feet, but aided by the policemen.

After he was placed in bed he continued in the same state of insensibility to external impressions, but appeared to resist any attempt to alter the position of his limbs, and exhibited a disposition to retain the limb in any position in which it was placed. He kept for some time continually opening and shutting his mouth at regular intervals, and winked his eyes naturally, and moved his eye-balls from side to side.

At 10 A.M., eight hours after his admission, he was still insensible; his bladder became much distended, and three pints of urine were drawn off, which exhibited no morbid character, but was of low specific gravity, 1010.

He remained in this state the whole of the 2d, and on the 3d he was still found insensible, having not uttered a sound since his admission. He was taken out of bed, and an attempt made to place him in the erect posture, but his whole body became rigid, all the muscles being thrown into powerful tonic contractions: he was returned to his bed, where he lay in the same insensible state: the urine accumulated in his bladder, and had again to be drawn off.

To-day various expedients were resorted to, to test the reality of his insensibility, which ended in confirming our belief, from the appearance of the patient, that he really was insensible. Among other means employed, the soles of his feet were filliped with a wet towel, without exciting the least indication of sensibility. A bottle of strong ammonia was held under his nostrils, but the fumes produced no effect beyond watering of the eyes; and after some time he turned away his head. He continued to lie in bed apparently unconscious, but occasionally snapping with his teeth.

On the second day after his admission (the 4th) he made signs for paper, and wrote an account of himself, stating that he had been subject to fits, and giving the address of his father, and also giving a history of himself during the day previous to his admission to the hospital. But it was very remarkable that in writing he seemed to trust entirely to the guidance of his sense of touch, for during the whole time

he was writing he kept his eyes averted from the paper, with a fixed gaze directed towards the ceiling, and when a handkerchief was applied round his eyes, it did not interfere with his ability to write. But we could not obtain any satisfactory evidence that he could see, or hear, or smell.

After this he began to ask for food, and ate with the most extraordinary eagerness, snapping at everything that came in contact with his lips: even pieces of paper, which he chewed and swallowed.

In the afternoon of this day he began to see, and amused himself reading and writing, in both of which he showed himself a proficient.

He was still defective in hearing and in the power of speech; he seemed quite insensible to the loudest noises; shouting into the ear, which generally produces so disagreeable a sensation in the meatus, seemed to produce no effect upon him, either upon the common sensibility or upon the hearing. We could only converse with him on paper, and he showed great readiness in keeping up the conversation.

He continued in this state in the hospital nearly three weeks from his admission: various means and devices were tried to ascertain whether he could hear; but all who saw him, both nurses, patients, students, and visitors to the hospital, agreed in opinion that he could not or did not hear, or that if he did hear he carried on his deception in the most remarkable manner.

Nor could he be induced to speak: on one occasion I ordered him to be kept without food until he spoke, but the effect of this was merely to cause a paroxysm of hysterical crying.

Unfortunately this patient was inveigled from the hospital by some devotee of mesmerism; and he was placed under the care of a physician who unhappily misapplies his great talents to what I can regard no otherwise than as the conjurings of mesmerism. By this gentleman he was mesmerised daily for one hour for the space of four weeks. After one of these mesmeric sittings he recovered his hearing, and in three-quarters of an hour after that his speech. I cannot help, however, expressing my belief, that, as his health had greatly improved under the discipline and treatment to which he was subject in the hospital, he would have recovered both his hearing and his speech in less time than under the mesmeric processes, which, indeed, I cannot doubt, had the effect of retarding recovery; for I can no more believe that the hysterical disposition is to be removed by the frequent repetition of the hysterical paroxysms, than I can suppose that the tendency to epilepsy is to be cured

by the daily repetition of an epileptic fit.

I am confirmed in my belief that this patient would have perfectly recovered without the aid of the mesmeric mysteries, by the favourable result of another case, which we succeeded in keeping out of the hands of the mesmerists.

The patient, in this case, was a girl of 19 years of age, of a nervous temperament. She accidentally fell into a river, and was immersed in deep water for many minutes; she was taken up in a state of suspended animation. Six hours elapsed before she recovered her senses; and she continued unwell and depressed with headache for several days after the accident. Ten days after it, she had an hysterical paroxysm, and lay for nearly four hours in a state of stupor, out of which she came, deprived of the power of speech and of hearing, as well as of taste and smell, and her mental faculties quite benumbed or paralysed, as she gave no indication that she recognized any of her friends about her.

An admirable account of this case has been given in the *Lancet* for 1845, by my friend Mr. Robert Dunn, to whose kindness I am indebted for the opportunity of seeing it. The patient recovered perfectly under a treatment directed to the improvement of her physical health and strength, and is now in a perfectly healthy state.

Whatever be the nature of these comatose hysterical affections,—whether they occur in men or in women, and whether they are complicated with ecstasic or cataleptic phenomena,—the general tendency is for them to get well. Nor have we any evidence of the existence of any inflammatory or other organic lesion in the brain or other part of the nervous system in these cases. There cannot, indeed, be any doubt that they are never accompanied by an inflammatory state of the brain or its membranes.

Traumatic coma.—I shall next refer to a form of coma which accompanies injuries and severe operations, which is well known by the name of *concussion*, when occurring in consequence of injuries to the head.

The phenomena of concussion are these:—A man gets a violent blow on his head, without any fracture or injury of the bone: he is stunned; in other words, he is rendered comatose from the moment of the injury. If the blow be not severe, he remains insensible for a little time, and then recovers perfectly; or, if the shock be great, he becomes cold, his pulse intermittent, and he dies apparently from the shock, the insensibility remaining to the last; or he remains insensible for some time, then becomes delirious, and ultimately recovers. Such is the history of

concussion of the brain, or traumatic coma from shock to the brain. When you examine the brain in fatal cases, you find it in an apparently healthy state. "From such examination," says Sir Benjamin Brodie, in his valuable paper on *Injuries of the Brain*, in vol. xiv. of the *Med.-Chir. Transactions*, "we learn that the symptoms which are ascribed to concussion do not depend on any such derangement of the organization as admits of being disclosed to us by dissection. The brain appears to retain its natural structure unimpaired." And not only does this state of coma occur in cases of injury of the head, but also from the shock produced by severe surgical operations or other injuries.

Many years ago I was present at the operation of lithotomy on a boy nine years old. The operation was done in the ordinary way, without any untoward accident which could endanger the favourable result. The evening after the operation the child began to be comatose, with cold extremities and small pulse, and without the least indication of peritonitis. The patient continued in this comatose state for three days, and died. I examined the body with great care, but could not detect any morbid appearance except a general pallor of all the internal organs.

Severe and extensive burns and scalds create at the moment of the accident, or very shortly after, a state of more or less complete coma.

This state of coma may be due partly to the physical effect of the shock, and partly to the mental trouble of the severe fright. Such was probably the mode of death in the case of the young woman known as the *Lion Queen*, who formed part of the company attending Wombwell's menagerie. The case was reported in the newspapers some months ago. The girl, while playing with the tiger, vexed him, whereupon he seized her neck in his mouth, and inflicted a severe wound in the neck, which exposed the carotid artery without injuring it. The girl, as I learned from a medical friend who witnessed the attack of the tiger, fell senseless; and, although she lost no blood, continued senseless and pale, and died in less than a quarter of an hour.

We learn, then, from these facts, that shock is capable of producing a state of coma without the existence of any active morbid process of the brain.

Coma from compression.—A special form of coma is that which has most attracted the attention of observers as affording an easy and obvious explanation of the phenomena. This is coma from compression of the brain by some new material developed within the cranium or introduced into it, or by the effusion of blood. Hæ-

morrhage takes place into the substance of the ventricles of the brain, or on the surface of it, and coma ensues, which is more or less according to the magnitude of the clot of blood. The brain or parts of it are evidently compressed by the large quantity of blood effused; for we have obvious marks of compression in the condensation of the neighbouring brain structure. The degree of the coma is influenced, not merely by the magnitude of the clot, but also by the situation of the effusion: thus blood effused at the base of the brain or into its ventricles will produce a greater amount of coma than if the blood have been poured out on the surface or in the substance of the hemispheres of the brain; and, moreover, a slight clot on the base of the brain, especially on the pons and medulla oblongata, while it produces profound coma, will quickly kill the patient; while a large effusion into the ventricles will likewise create profound coma, but one by no means so rapidly fatal to life.

I had an interesting illustration of this many years ago in two cases which occurred on the same day. One was a man who was convalescent from fever, and had got out of bed and assisted to make his bed, when he fell like a horse pithed, and died immediately. The second was a man in the hospital for disease of the heart, who suddenly became profoundly comatose, with great stertor, but lived many hours. In the first case a *small* clot had been effused on the pons varolii, near its posterior margin, and extending on to the medulla oblongata. In the second case a *very large quantity of blood* was poured into the lateral ventricles, and distended them both. The small clot in the first case caused rapid death, because it compressed suddenly the medulla oblongata, "the link which ties us to life," as Mr. Mayo happily terms it. The large clot caused profound coma, but was not so rapidly destructive to life, because it at first compressed chiefly parts more immediately concerned in mental phenomena.

On the same principle, the accumulation of water in the ventricles produces coma; and in these cases we have abundant evidence of compression, in the condensation of the surrounding brain substance, the widening of the ventricles, the firmness of their walls when the cavity is laid open, in consequence of which in the recent brain they will not collapse, and the flattening of the convolutions.

So, also, the growth of a tumor within the skull; an aneurism of the basilar artery; an exostosis from the interior of the cranium; a piece of bone depressed at the seat of a fracture,—are capable of producing compression of the brain, and consequent coma.

May increased sub-arachnoid effusion cause coma?—It is a popular notion, adopted on very feeble grounds, that compression of the brain, and consequently a comatose state, may be caused by the accumulation of fluid around the ventricles. There are some very good reasons for adopting the contrary opinion, that the existence of fluid in the subarachnoid space never does compress the brain, and cannot be regarded as a cause of coma by compression.

1st. It is clearly proved by the researches of Cotunnus and of Magendie, confirmed by the best subsequent observers, that a certain quantity of fluid in the subarachnoid space, both in the cranium and in the spine, is essential to health, and that this fluid is in greater abundance in the old, where the brain has begun to shrink, than in the plump well-developed brain of the young and adult.

2dly. That in cases where the largest collections of fluid have been found around the brain; that organ has been found shrunken, not compressed: the brain has wasted, from a defective nutrition; there is no flattening of the convolutions, nor condensation of the brain substance, but a shrinking of the convolutions,—a widening of the sulci between them, without any morbid change, either one way or the other, in the density of the substance of the brain. Thus it may be laid down that the quantity of subarachnoid fluid is in the inverse ratio of the bulk of the brain, and that with a large, well-developed brain we shall find but little subarachnoid fluid; whilst in the small, shrunken, and wasted brain, the accumulation of that fluid is considerable.

When the wasting, or shrinking, or collapse of the brain is partial—limited to the region of two or three convolutions,—a partial accumulation of fluid will take place in the situation of the shrunken part. A softening of a portion of the cerebral hemisphere will often cause a collapse of the convolutions above it, and thus space will be created for the accumulation of fluid.

3dly. I think it may be laid down that the accumulation of any large quantity of fluid in the ventricles, or the development of a tumor in the substance of either hemisphere, or the formation of a clot of blood there, is incompatible with the existence of a surrounding subarachnoid fluid. The pressure from within displaces the subarachnoid fluid, and prevents the secretion of it. Thus, we never find the two fluids, intraventricular and subarachnoid, existing together in large quantity: they may exist together in small quantity in shrunken, small, and ill-nourished brains, and more especially where the defective nutrition chiefly

affects the hemispheres and the convolutions.

For these reasons I have long adopted the opinion that the effusion of a large quantity of subarachnoid fluid is a result—and a result probably of a conservative kind—of the shrinking or diminished bulk of the brain from some cause, and that in no case does the accumulation of fluid around the brain cause compression of that organ, nor can it be regarded as a cause of coma.

Rheumatic and gouty coma.—Coma occurs in the course of rheumatic fever and of gout. The mode of invasion of the comatose state in these affections is very analogous to that of delirium, and very commonly follows that affection—always when it takes an unfavourable course. A patient may be going on well in rheumatic fever; he, however, suddenly becomes restless and uneasy, and falls into a comatose state, in which he dies. The late Mr. Abernethy has referred to three cases of this kind which proved fatal, and he states that he found no abnormal condition of the brain. His words are—"I may also mention, that I formerly examined the brains of three persons who died in a comatose state, in consequence of the metastasis of rheumatism. In these cases no morbid appearance was observed in the brain, except some slight marks of inflammation of the pia mater." These slight marks were, no doubt, nothing more than some increased vascular turgescence of parts of the membrane.

The following case shows that every form of cerebral disturbance, delirium, convulsions, and coma, may occur in rheumatic fever without any lesion of the brain which can be detected by ordinary means of observation.

Martha Mitchell, *æt.* 34, was admitted on the 18th June, 1844, with rheumatic fever, the knees and ankles being the joints affected. On the 19th she became delirious; and a few hours afterwards she had a convulsive fit, succeeded by coma and death. At the post-mortem examination the brain and its membranes were found pale, but otherwise healthy. There were marks of recent pericarditis.

The occurrence of coma is more frequent in gout than in rheumatic fever, whilst delirium seems more frequently to occur in rheumatic fever. It is chiefly in the cases of chronic gout, in which the system is attacked pretty generally, that this state occurs, and the state of the kidneys is highly favourable to its development. Rheumatic fever differs from gout remarkably, as regards the extent to which the kidneys suffer. Although in both diseases these

organs are much disturbed, and exhibit a considerable departure from their normal mode of action, in gout they are apt to suffer much in their nutrition. They shrink to one half their natural size; the tubes lose their epithelium; serous cysts are developed; lithate of soda is found deposited in the tubes of the medullary portion. In persons who have long been victims of gout, whose joints are crippled, and the articular surfaces covered with a layer of lithate of soda, looking like plaster of Paris, this state of kidney is probably invariably present; and it is in such cases that we may generally expect the termination of gout by coma. Frequently the morbid state of the kidney is indicated by the presence of albumen in the urine, but it may exist without the escape of serum into the urine; the absence of that principle from the urine is, therefore, no proof that renal disease does not exist. The following case illustrates this form of gouty coma:—A gentleman's butler, about 50 years of age, had been the subject of several attacks of gout. He was admitted into the hospital in consequence of a copious effusion into one knee-joint; and his urine was found to be sufficiently copious, clear, and pale, with a small quantity of albumen. He suddenly became comatose, and died: and on examination we found a copious effusion of fluid into one side of the chest, which must have taken place a few hours before death, as I had satisfied myself by auscultation that no such effusion existed on the previous day; there were also very contracted kidneys; and the brain afforded no signs of disease.

It is possible, however, that sudden death by coma may take place where there is no evidence of the diseased state of the kidneys which I have described.

A gentleman, æt. 35, a very nervous subject, the nervousness dating, according to his own report, from a mercurial erethism, which was brought on by a course of mercury for an ophthalmic disease. This gentleman was attacked with gout of the wrist and toes. He was treated by mild saline purgatives and small doses of the colchicum wine; this latter, however, appeared to increase his irritability, and I left it off after using it only twenty-four hours. I then gave small doses of morphia, under which he improved considerably; and on the 5th and 6th of September he appeared to be advancing quickly to convalescence. On the latter day I diminished the dose of morphia: at half-past twelve of that night he suddenly became comatose, and died in a few hours. Unfortunately I was not permitted to examine the body in this case; but I can scarcely believe that there was any extensive disease

of the kidney, as the man was young, and, had not been subject to many attacks of gout.

This form of coma, which for the sake of distinction may be called *gouty coma*, is doubtless nearly allied in its essence to the epileptic coma, especially in those cases in which the kidneys are attacked.

Coma in Typhus and Erysipelas.—The comatose states which accompany typhus and erysipelas are too well known to render it necessary for me to describe them. The typhoid condition is really a more or less comatose state almost from the beginning; and the same may be said of erysipelas: and in both the increase of the state of coma must be looked upon as a most unfavourable omen. When it ends fatally, death seems to ensue from exhaustion, nor can any evidence be obtained of the existence of any active morbid process affecting the brain.

In like manner we have coma, in connection with the exanthemata, both in the premonitory and in the secondary fevers. A patient who receives a large dose of the poison may become rapidly comatose under its influence, and before any eruption can make its appearance. I saw a case of this kind some years ago at a ladies' school at Hackney. A young girl had rigor and sickness, and within twenty-four hours became comatose. When I saw her she was lying on her back, breathing quickly, perfectly insensible, almost blue, and with a small rapid pulse. She died in a few hours afterwards. Scarlet fever was very prevalent in the neighbourhood at the time, and some cases of it had occurred in the school. Mr. Toulmin, who also saw the patient, agreed with me in attributing the phenomena to a large dose of the scarlet-fever poison, which rapidly prostrated the powers of life.

Coma likewise ensues in cases of anæmia from loss of blood, or from the imperfect formation of the blood, as in cases of chlorosis. Convulsions and coma precede death in animals killed by loss of blood. The state of syncope from loss of blood, or from debility of any kind, is the simplest form of this kind of coma: when bleeding is carried to a certain point, especially if the patient be in the erect posture, this state of insensibility comes on, and the patient remains in a comatose state for a longer or shorter time, and sometimes a slight convulsion occurs at the moment the faintness commences.

The sudden cutting off of a certain quantity of blood from the brain may produce the comatose state. A remarkable instance of this occurred to me in a case of which an account was published in the twenty-seventh volume of the *Medico-Chirurgical*

Transactions. In this case the whole current supplied to the right side of the brain by the right common carotid artery was cut off by the sudden occlusion of that vessel through the passage of a large quantity of blood between its coats from a fissure in the aorta, which gave rise to the formation of an extensive dissecting aneurism. The patient fainted at the moment of the occurrence of the laceration, and a drowsy semi-comatose state was the most prominent symptom throughout his illness.

We have already seen that there is abundant evidence that delirium and convulsions may come on in cases where patients have suffered from loss of blood.

There can be no doubt that an inadequate supply of blood to the brain is likewise favourable to the production of a state of coma. The most satisfactory proof of this is afforded by the results of Sir Astley Cooper's interesting and most important experiments on ligature of the carotid arteries, and compression of the vertebrals in rabbits; and in some cases ligature of the common carotid artery in the human subject has been followed by coma.

Lastly, I may refer to the coma which is produced by the introduction of certain poisonous agents into the system, either through the digestive organs, or by their direct injection into the blood.

Alcohol swallowed in large dose is capable of producing a state of coma very rapidly.

But the most remarkable form of coma, of this kind, is that produced by opium. A person poisoned by opium in large dose falls into profound coma, and lies just as if the insensibility were produced by compression of the brain,—snoring, and evincing no sign whatever of sensibility; and yet, when the brain is examined, there appears no evidence whatever to justify the supposition that the brain did suffer compression, or that it was the seat of any active morbid process,—such as inflammation.

So also, when chloroform, or ether, or other substances of the same class, are inhaled, the patient passes quickly into coma, the degree of which can be regulated exactly by regulating the quantity of vapour to be inhaled. Yet, on examining the brain after death from an undue quantity of chloroform, no morbid appearance is found which can refer the comatose phenomena to the influence of pressure, or to any active morbid process.

These are among the best-marked examples of the toxic coma, produced by the direct introduction of poisons, and they may be regarded as typical of the coma which arises from the introduction of other narcotic substances; as Indian hemp, belladonna, &c.

I have now detailed the principal facts deserving of our attention in the clinical history of delirium and coma. The analogy between the circumstances under which delirium occurs, and those under which coma takes place, is a fact of the highest interest and importance, and must be kept strictly in view in any attempt to devise an adequate theory of the pathology of these states.

From what I have stated we learn the following facts:—

1. That delirium and coma may be produced by the introduction of certain poisonous agents into the blood, either directly or through the digestive organs.

2. That a deteriorated and poisoned state of the blood is favourable to the production of delirium and coma; as in the cases of rheumatic and gouty delirium and coma, and of the delirium and coma of typhus, erysipelas, and the exanthemata.

3. That the same state or states of the brain which are favourable to the production of epileptic convulsions are favourable to delirium and coma.

4. That the anæmic state, or that state of blood in which the colouring matter is very deficient, is favourable to the production of delirium and coma.

5. We learn that compression will produce coma, but not delirium.

And lastly, that in all these cases the delirium or the coma may occur in their highest states without the slightest evidence of any inflammation of the brain, or of its membranes.

I take this opportunity of correcting the quotation made from Dr. Watson's lecture at the close of the last lecture, which, although it expressed his meaning, was not cited with perfect accuracy.

Alluding to cases of delirium supervening on rheumatic fever, Dr. Watson says:—"Such cases are, in fact, spoken of as cases of metastasis to the brain. It may sometimes be so,—nay, I know that it sometimes is so,—but not often."

In quoting Dr. Watson, I did not mean to adduce his high authority in support of the doctrine of metastasis. The last two words of the passage quoted showed, as I think, that he only admitted it as the rare exception to a very general rule. But finding myself tempted by all that I had seen, and by what I could glean from others, to dogmatise that the delirium of rheumatic fever *never arises* from rheumatic inflammation within the cranium, I allowed myself to be checked by the opinion of one whose views I have the best reasons to respect, and which are justly held in the highest estimation by the profession at large.

Dr. Watson has, indeed, adduced very strong evidence in favour of the views which I advocated, and this so long as fifteen years ago, in a clinical lecture delivered by him at the Middlesex Hospital, and printed in the sixteenth volume of the *MEDICAL GAZETTE*. This lecture he has reprinted in the second and third editions of his valuable *Lectures on the Practice of Physic*.

I extract the following remarks from a note with which Dr. Watson has favoured me:—

"Many years ago (he says) a female patient of mine, who had rheumatic fever, and subsequent cerebral symptoms, died in the Middlesex Hospital, whither she had been sent, if I rightly remember, by Mr. North. Upon examination of her brain, we found unequivocal pus smeared over its hemispheres.

"It was the recollection of this single case which led me, in lecturing, to affirm, perhaps too positively, the occasional but unfrequent metastasis which you are inclined to deny.

"It is possible,—nay, I now think it probable,—that this concurrence of rheumatic inflammation of the joints with inflammation of the membranes of the brain may have been merely a casual coincidence."

TREATMENT OF TYPHUS FEVER AT BELLEVUE HOSPITAL, N. Y. BY DR. REESE.

THE opportunities for observing the results of medication in cases of typhus or ship fever have been ample, and perhaps unsurpassed in the country. It has been, however, only in the later periods of the malady that the patients have been admitted; very rarely, indeed, before the eighth day, and often much later, and not until complicated by some local mischief.

It has been uniformly observed that those patients who had been subjected to any active medical treatment before admission were in a worse condition than those in whom no medication had been previously resorted to: and, whenever bleeding, purging, vomiting, &c. had been employed before they were brought hither, the prognosis was unfavourable; and, with very few exceptions, these cases proved fatal. How far the depraved constitutions of this class of patients may have rendered them unable to bear depletory remedies of any kind, even in the earlier stages of the fever, may not absolutely be affirmed; but the fact of their being contra-indicated, and always mischievous, became apparent in all our cases.

In regard to the treatment resorted to, no active means were employed, except

when complications demanded a deviation from this rule, or when diarrhoea or erysipelatous inflammations supervened. These and other analogous sequelae were very rarely observed, except in those cases which had previously been under medication before they reached the hospital, or in which pneumonia, or some other form of the phlegmasia, had co-existed with the fever. The few cases which occurred as exceptions were traceable to too early and too liberal use of stimuli.

Our usual course with the fever patients was to enjoin absolute rest in bed, with free ventilation, cool air, and warm drinks, the latter being nutritious, and occasional doses of the *sp. mindereri*, with or without a grain of ipecacuanha, and continued until free perspiration was induced. When much *Acid* prevailed, ice and iced water were found grateful; and, if necessary, the head, face, and neck were sponged occasionally with iced water. When diarrhoea or delirium was present, counter-irritants to the extremities and abdomen were relied on, which were always useful; and if, on the subsidence of the fever, after longer or shorter persistence, there was a flagging of the pulse, or other evidences of great prostration, wine whey, milk punch, with brandy and ammonia, were consecutively employed, and afterwards persevered in, according to the indications. The counter-irritation to the surface by mustard or epispastics was superadded, if delirium or any degree of coma was present.

The only modifications of this treatment were, in complicated cases, or severe sequelae, cupping for pneumonia; injections of nitrate of silver for protracted diarrhoea; calomel, opium, and ipecacuanha in combination for dysenteric symptoms; and for supervening erysipelas, the internal use of quinine, and the external application of ice, nitrate of silver, and blisters.

Under the treatment thus described we had the satisfaction of witnessing a degree of success which has rarely been exceeded by any other plan; and, when the unfavourable condition of our patients when received is considered, the rate of mortality must be regarded as unusually small, the statistics of the hospital demonstrating that we lost less than one-sixth of our typhus cases, or about fifteen per cent.

In our numerous dissections of the fatal cases, more or less effusion into the ventricles of the brain was almost uniformly discovered; while the instances of intestinal ulcerations, or the morbid condition of Peyer's plates, &c., as described by the French writers, were but rare, and even then the cerebral mischiefs were more obvious and prominent. — *American Journal of Medical Sciences*, Jan. 1850.

Original Communications.

BRIEF NOTES ON THE DISEASE,
INDIAN VILLAGE CHOLERA.BY ASSISTANT-SURGEON MOORE, B.A.
Gwalior Contingent.

(Continued from p. 713.)

PART II.—(Concluded.)

THE following cases, but Case X. in particular, appear to me to bear so directly on the question, that no longer can any doubt be entertained as to the seat of cholera:—

CASE VII.—*State of the stomach and intestinal canal.*

A murderer, Bhola by name, died from the effects of cholera on the 9th of October, 1849. He was a prisoner, confined in the jail at Lullutpore, and had suffered from the symptoms of cholera in its second stage about five weeks previously. He recovered from the effects of the first, and died from the effects of the second attack.

Nine hours after death the stomach and intestinal canal were slit open: the internal surface of the former was coated over with a thick, glutinous, semi-transparent mucus, easily detached from the epithelium of the mucous membrane by a jet of water. The mucous membrane was pale and tumefied. On the posterior wall, however, there existed some patches of vascularity. The vessels were gorged with crimson-red blood. This vascularity of the submucous tissues partook of a deeper colour for one inch within the stomach, close to the pylorus, and for two inches on the duodenal side of the pyloric orifice. In this first division of the duodenum, the crimson-red injection of the mucous membrane and subjacent tissues was more strongly marked than in any other portion of the intestinal canal.

The gut was distended with serum, mucus, and lymph, blended together; forming a fluid secretion, which in colour and consistence resembled thin oatmeal gruel. The surface of the mucous membrane was besmeared with a secretion, glutinous and semi-transparent, which, when washed away, exposed

to view the faded rose-coloured tint of the submucous tissues. On closer examination, a network of minute blood-vessels, gorged to excess, was noticed between the folds of the mucous membrane. Some intumescence of the membrane was caused by the infiltration of serum into the submucous tissues.

Jejunum and ileum.—In the former, the contents, consisting of a thick gruel-like secretion, and the diffused pinkish redness of the mucous membrane, differed in no respect from the abnormal appearances met with in the duodenum. The internal surface of the ileum was coated over with a layer of thick inspissated mucus, semi-transparent, and resembling a thick solution of isinglass. This exudation adhered so tenaciously to the surface that it could not be washed off except by a forcible jet of water. The mucous membrane and subjacent tissues were injected of a vermilion-red colour. Throughout the whole extent of the duodenum, jejunum, and ileum intestines, the glandular bodies were prominent, and appeared irritable, tumid, and vascular, forming points towards which converged minute vessels injected with crimson-red blood.

Colon and rectum.—The internal surface of each, like that in the ileum intestine, was coated over with a quantity of thick, tenacious, gluey mucus, semi-transparent, and resembling a strong solution of isinglass. The colon was distended with a thin sero-mucous secretion of the same description as that passed during life. The capillaries were gorged with blood; the mucous membrane was dyed of a deep red colour.

The liver, spleen, pancreas, and kidneys, were healthy: they were free from engorgement. The bladder was empty and contracted. The secretion of urine was suppressed from the onset of the disease. The functions of the kidneys had been suspended.

Lungs.—The inferior lobe of the right lung was gorged with blood; it had lost all crepitation under pressure; its colour was dark purple. When incised, a quantity of fluid tar-like blood exuded from the cut surfaces. The middle lobe was gorged with blood, but not to the same extent as the inferior lobe. The superior lobe was healthy. The left lung was similarly engorged, but not to the same degree as the right. The mucous membrane of the bronchial

tubes was stained of a dark red colour. The large venous trunks and the cavities of the heart were distended with fluid tar-like blood. The muscular parietes of the ventricles were firm and healthy.

Symptoms on admission. — Pulseless. The powers of life were depressed. The colour of the lips and gums, of the fingers and toes, compared with other parts of the body, was deep indigo blue. The surface of the body was cold. A clammy sweat was oozing out over the head, neck, and chest. Thirst was insatiable. The cramps of the muscles were confined to the legs and thighs. The eyeballs were sunken into the sockets. His voice was hollow and feeble. The rice-water discharge trickled away from the bowels. The abdomen was pinched backwards towards the spine, and was doughy or inelastic under pressure. Restlessness and anxiety, and the tossing about of his arms and legs, were marked features in his case. The secretion of urine was suppressed.

The impulse of the heart could not be felt: its action was rapid and feeble; the sounds resembled the distant ticking of a watch. This change could not be attributed to any defect in the muscular energy of the ventricles, nor to any lesion in the muscular fibres. The change in the action and sounds of the heart arose from the insignificant quantity of blood which flowed towards the heart, and passed through the auricular and ventricular cavities, for circulation through the system. The seizure was of eight hours' duration before he became completely prostrated and was removed to the hospital.

CASE VIII.—*State of the stomach and intestinal canal.*

Twelve hours after death.—The stomach and intestinal canal of Sona were slit open. He was a prisoner in the jail at Lullutpore, and had died from the effects of cholera on the 9th October, 1849.

The surface of the mucous membrane of the stomach was coated over with a viscid, tenacious, gluey or gelatinous exudation of mucus and lymph. With the exception of a few circumscribed patches of a vermilion-red colour, the mucous membrane was pale. There was some intumescence of the coats, from the infiltration of serous

fluid into the submucous cellular tissue, but there was not the slightest approach to softening. Close to the pyloric orifice of the stomach, for one inch within the stomach, and for two inches on the duodenal side of the pylorus, the mucous membrane and subjacent tissues were dyed of a deep crimson-red. The capillaries were injected with the red particles of blood. They were gorged to excess. Beyond the first division of the duodenum the mucous membrane of the intestine exhibited a faded rose or pink colour. Flakes of lymph and of inspissated mucus were lodged between the folds of the mucous membrane. The fluid contained in the duodenum and jejunum intestines consisted of serum, mucus, and lymph, blended together, forming a thick gruel-like puddle.

In the jejunum and ileum intestines, the rose-coloured blush of the epithelium, of the superficial stratum of mucous membrane, and of the subjacent tissues, was less faded than might have been expected. In the ileum there existed numerous patches of intense vascularity. The capillaries close to the surface, and the capillary ramifications between the strata of submucous tissues, were gorged with blood. The fluid contained in the ileum differed from that in the duodenum and jejunum intestines: it was straw-coloured, thin in consistence, and more serous in its general appearance.

The glandular bodies of every description imbedded in the tissues of the stomach, of the duodenum, jejunum, and ileum intestines, were prominent to the eye: they appeared tumid, irritable, and considerably distended. In several parts of the canal the excretory ducts of the glandular bodies participated in the state of general inflammation. Their mouths were swollen, pouting, and unusually wide or patent.

The rose-coloured efflorescence, diffuse and continuous in the jejunum intestine, had completely faded in the colon and rectum. Some slight engorgement of the capillaries remained to denote that the mucous membrane and subjacent tissues in the large intestines had not escaped the universal attraction of blood to the surface, and the subsequent elimination of serum, mucus, and of lymph. The fluid contained in this division of the tube resembled in every respect the rice-water

discharges passed from the bowels during life. Flakes of lymph and mucus adhered to the surface of the mucous membrane.

The liver, spleen, pancreas, and kidneys, were healthy in their structures: they were free from engorgement. The bladder was empty and contracted. The gall-bladder contained some thin, black, pitch-like bile, which, when rubbed between the fingers, left a dark bottle-green stain.

The lungs crepitated under pressure: a crimson redness was diffused over their external surface, including the pleuræ. The lower lobes were purple in colour, from engorgement with fluid, black, tar-like blood. This, the uncoagulated and coloured portion of the blood, had become extravasated into the parenchymatous tissue towards the termination of the case. The cavities of the heart contained a small quantity of dark fluid blood.

The symptoms under which this prisoner laboured, when removed to the hospital for medical treatment, differed but slightly from those recorded in the murderer's case.

CASE IX.—*State of the stomach and intestinal canal.*

Seventeen hours after death, the stomach and intestinal canal of Poonooa were slit open. He was a prisoner in the jail at Lullutpore, and had died from the effects of cholera on the 7th October, 1849.

The stomach contained a small quantity of turbid fluid. Over the greater part of the internal surface the mucous membrane was pale. On the posterior wall, beneath the mucous membrane, circumscribed patches of a bright scarlet colour existed: these patches were in small circles, and were formed by minute scarlet points clustered together. The capillaries, gorged with red particles of blood, branched out into an arborescent form between the strata of tissues. A small quantity of thick inspissated mucus, formed into pellets, had collected close to the pyloric orifice. The mucous membrane was somewhat tumefied, but retained its firmness. The intumescence arose from the infiltration of serous fluid into the submucous cellular tissue. With the edge of a scalpel, or of a spatula, a quantity of thick, inspissated, ash-coloured mucus was collected from the

internal surface. In some parts this gelatinous exudation adhered tenaciously to the epithelium, and, when separated by a jet of water, exposed to view the spongiose or flossy surface of the epithelium. In other parts the exudation of glutinous mucus adhered but loosely to the epithelial surface of the mucous membrane.

The duodenum was distended with a cream-coloured fluid, thick in consistence, and resembling oaten gruel. This characteristic cholera-puddle was formed by the intimate blending together of serum, mucus, lymph, and the saline ingredients of the blood. In the first division of the gut a more marked degree of vascularity prevailed than in any other part of the intestinal tube. Almost invariably the vascularity remains in this section of the duodenum, although it may have faded in the stomach and in the jejunum and ileum intestines. The mucous membrane on the anterior wall of the duodenum in the second and third divisions was pale. On the posterior wall it retained a faded pinkish tint. There was slight intumescence, from the infiltration of serous fluid into the submucous cellular tissue. Between the folds of mucous membrane flakes of lymph adhered to the surface. The shreds were soft, inorganized, and recently effused. The condition of the jejunum intestine corresponded in every respect with that of the second and third divisions of the duodenum.

The ileum was distended with a straw-coloured fluid, clear and serous in appearance. That which flowed away from the gut was unmixed with flakes or shreds of lymph and mucus. The rose-coloured or pinkish tint of the mucous membrane was more distinct than in the jejunum. The minute capillaries, gorged with blood, formed arborescent vascularities beneath the mucous surface. There was no apparent intumescence of the mucous membrane. Externally, or towards the peritoneal cavity, the bloodvessels ramifying between the folds of the mesentery and the coats of the intestines were gorged with blood.

The colon and rectum were distended with fluid, which, unlike that in the ileum, resembled the sediment of rice-water or barley-water. Between this fluid contained in the large intestine, and the rice-water discharges passed during life, there was not any

difference. Patches of vascularity existed here and there in the colon, and also in the rectum; but, in other respects, the mucous membrane and subjacent tissues appeared healthy, when a stream of water cleared away the slimy mucus with which the surface was besmeared.

The glandular bodies in the stomach, duodenum, jejunum, and ileum intestines, were swollen. They were unusually prominent. The mouths of the excretory ducts were distinctly visible in several places. On close examination, the glands formed points, towards which from three to four red lines, or capillaries, converged. There could be no doubt that their swollen and distended state arose from irritability and inflammation.

The liver appeared healthy. When sliced, a small quantity of blood flowed from the veins. The bile in the gall-bladder was thick and tar-like. When rubbed on paper or between the fingers, it left a dark bottle-green stain. The spleen, pancreas, and kidneys, were healthy. The bladder was contracted; when slit open, it did not contain a single drop of urine.

The right cavities of the heart were distended with fluid, tar-like blood. The muscular structures of the auricles and ventricles were firm and healthy. The posterior part of the inferior lobe of each lung was gorged with fluid blood. The mucous membrane of the bronchial tubes was intensely vascular.

Symptoms on admission.—The extremities were stiff and cold. The muscles in the calves of the legs, in the arms and hands, suffered from spasmodic contractions. At times the contractions were so violent, that the muscles were twisted into round hard balls. The pulpy extremities of the fingers and toes were shrivelled, whilst the colour of the skin had changed from black to a deep indigo blue. Heat remained in the surface of the body about the chest. Thirst was insatiable. He had vomited, and had been purged several times, before removal to the hospital. The discharges from the stomach and from the bowels were sero mucous, or such as resembled rice-water. The gush of fluid from the bowels occasioned little or no pain. The quantity passed on one occasion, after having been in hospital about half an hour, ^{ly} two quarts. The ^g

at the wrist, but could be felt: the beats were so rapid that they could not be counted: the vibration under the finger was weak and thready. The duration of his illness, according to his account, did not exceed six hours.

At 12 o'clock P.M. the symptoms were more unfavourable. Large drops of cold sweat had oozed out on the forehead, the neck, and the chest. The temperature of the body had fallen. The breath had become cold; the tongue was cold. The eyes had shrunk into their sockets, but were bright. His intellectual powers were clear. In a hollow and scarcely audible voice, he asked for a relative to be admitted into the jail to see him, as he had only a few hours to live. The pulse had ceased to beat at the wrist. The impulse of the heart could not be felt: its action was rapid and indistinct: the sounds resembled the ticking of a watch. The breathing also had become laboured. The vomiting and purging of rice-water fluid continued, but was less in quantity, and not so frequently passed from the bowels. He died shortly after this report was taken.

CASE No. X.—State of the stomach and intestinal canal.—One and a half hours after death the stomach and intestinal canal of Dowriom Sing were slit open, from the œsophagus to the rectum. He was a prisoner under trial, who had died from the effects of cholera on the 7th of October, 1849.

The stomach contained a small quantity of gelatinous fluid. The surface of the mucous membrane, from the cardiac to the pyloric orifice, on its concave and convex curvatures, on its upper and under surfaces, exhibited a diffused blush of bright crimson redness, somewhat less marked in depth of colour than the incipient blush of scarlet redness by which the first stage of erysipelas is indicated. The vascularity of the mucous membrane was uniform,—that is, the scarlet efflorescence was equally diffused over the surface. The free surface of the mucous membrane was coated over with a layer of tenacious glairy mucus, semitransparent, and of a jelly-like consistence. This exudation of ropy mucus was greater in quantity, and firmer in consistence, on the posterior wall, or depending part of the stomach, than elsewhere. When raised on the edge of the scalpel, the

strings, or glutinous shreds, remained attached to the mass of mucus adhering to the coats of the stomach. The surface of the mucous membrane on the anterior wall appeared as if it had been smeared over with a thick solution of isinglass.

This exudation of mucus, with shreds of lymph intermixed, when removed by a forcible jet of water, exposed to view the crimson redness of the mucous membrane and subjacent tissues, with a flosy and irritable condition of the epithelium. The mucous membrane was firm, without the slightest approach to softening, but tumid and velvety, from the infiltration of serous fluid into the submucous cellular tissue. The veins on the external or peritoneal surface were gorged with fluid blood.

The *duodenum* and *jejunum* intestines were distended with a saffron-coloured fluid. It trickled away from the interior of each gut in a thick stream. In consistence it resembled thin porridge, or oatmeal gruel; in composition, it was formed by the intimate blending together of serum, of mucus, lymph, and the saline ingredients of the blood. Flakes of lymph adhered to the folds of the mucous membranes, and the internal surface was coated over with a thin layer of glairy semitransparent mucus. The fluid contained in the ileum intestine, on the contrary, was thin and clear, and straw-coloured, purely serous; whilst, in the large intestine, from the cæcum caput coli to the rectum, the fluid was muddy white, devoid of odour, loaded with flakes of mucus and lymph, and resembled the sediment of barley-water. In every respect it corresponded with the rice-water stools passed from the bowels during life.

The deep rose-coloured tint, or crimson-red blush, prevailed throughout every part of the intestinal tube. The mucous membrane, and subjacent tissues in the ileum and in the colon, even to the lower flexure of the rectum, exhibited the scarlet efflorescence, or erysipelatous blush, as strongly marked as that noticed in the stomach and duodenum. In the small intestines the epithelium was flosy. Its spongioses stood out erect, and were dyed of a deep pink colour. Flakes of inspissated mucus, and of plastic lymph, adhered to the folds of mucous membrane. Although these flaky exudations of lymph

were easily removed by a jet of water, yet the crimson redness of the tissues remained. The mucous membrane appeared tumid. The coats of the small intestines felt velvety between the fingers, in consequence of the infiltration of serous fluid into the submucous cellular tissue. The vessels on the external or peritoneal surface were gorged with fluid blood.

The glandular bodies of every description, embedded in the submucous tissues, and scattered throughout the stomach and intestinal canal, appeared tumid, vascular, irritable, and distended with fluid. Without the aid of a lens, the mouths of the excretory ducts appeared swollen and pointing; and, in those spots where the vascularity was most intense, the excretory ducts not only gaped widely, but the gland formed a point towards which a number of minute vessels, gorged with blood, converged.

The blood contained in the large venous trunks was in a fluid state, dark, tar-like, and uncoagulated. The structures of the liver were healthy. The gall bladder was distended with viscid pitch-like bile. The kidneys, pancreas, and spleen, were healthy. The bladder was contracted and empty. It contained a few bubbles of air mixed with mucus, but not a drop of urine.

Symptoms on admission.—Between 11 and 12 o'clock P.M. Dowriow Sing was removed from the jail to the hospital. In the early part of the day he had been seized with vomiting and purging of rice-water fluid. Being a Thakoor of powerful muscle, he held out against the attack in the first instance. When seen by me he was in the third stage of cholera. His extremities were cold. The surface of the body was cold. The pulpy extremities of the fingers and toes were shrunk and shrivelled. The hands and feet had changed in colour from black to a deep indigo blue. The eyes had sunk into their sockets. The skin of the face appeared pinched. The breath was cold: the tongue also was cold at the top and at the sides. A stream of rice-water fluid trickled away from the bowels without his knowledge. He experienced no pain in the abdomen. The quantity of fluid collected in the earthen pot under his bed, had it been measured, would have exceeded two quarts: it was loaded with a flaky sediment: shreds of mucus and lymph

floated through the supernatant fluid. A small quantity of clear sero-mucous fluid was ejected from the stomach.

The muscles in the calves of the legs and thighs, in the arm and forearm, the recti muscles of the abdomen, suffered from violent spasmodic contractions. These muscular spasms and an insatiable thirst formed his chief complaints. A cold clammy sweat was oozing out on the forehead, the neck, and thorax. His intellect was clear; and the eye, although sunken in its socket, was bright.

The pulse could not be felt at the wrist. Feeble and thready vibrations were communicated to the finger from the arteries in the neck. The impulse of the heart could not be felt: its action was indistinct: the sounds, rapid in succession, resembled the distant ticking of a watch. This alteration in the character of the sounds of the heart, and in its action, originated in the deficient flow of blood towards the cavities, and in the convulsive efforts of the muscular fibres to propel an insignificant quantity of devitalised blood,—a fluid thick, black, and tar-like, deprived of its due proportion of serous and saline ingredients.

All efforts to resuscitate the system failed. In turning from one side to the other to relieve a spasmodic contraction with which the muscles of one side of the chest were affected, he died.

This case, in the suddenness of the attack, in the rapidity with which the symptoms advanced to the third stage, in the failure of treatment to reanimate the system, in the morbid appearances discovered one and a half hour after death,—is as perfect a specimen of the Indian village cholera as can be extracted from my note book. Medical men who are in the slightest degree sceptical as to the seat of cholera, and as to the source of the symptoms characteristic of cholera, ought to examine within one hour after death the stomach and intestinal canal of the patient who has died from the effects of the disease. They need not then travel into the celestial regions of speculative theory to account for the globules of lymph with their discs, the globules of mucus with their discs, the infinitely varied shapes, regular and irregular, of the saline ingredients of the secretions, being fungoid bodies. Nor need they experience

much difficulty in accounting for the rapidly fatal progress of cholera when the first and second stages have been neglected or maltreated.

[To be continued.]

ON THE USES OF THE WHITE AND GREY MATTERS OF THE BRAIN.

BY JOSEPH SWAN.

THE cerebral substance is partly composed of matter so soft as to require a membranous tissue strong enough for containing it, and preserving the form and integrity of the whole. The pia mater, on a superficial view, appears only as an external covering, and a conductor to the blood-vessels. After it has invested the grey matter it is probable that it assumes a resemblance of the arachnoid on its connection with the white, the tubes and meshes of which it then invests. There is thus, also, a gradation of vascularity, so that both are supplied with peculiar capillaries and modifications of the nutritious fluids according to the functions or requirements of each kind of matter. The particles of the grey matter probably form separate organs, which are combined partly by fine filaments of the pia mater and capillary vessels, partly by a more or less fluid matter sufficiently analogous to their own kind for completing their concatenation. Recent medullary matter is composed of tubes, which communicate for forming meshes: these are very distinct in the dry state, but in the recent only just prevent the adhesion of the tubes. The membrane in the interstices on the outside of the tubes has not only the power of conducting capillaries for conveying the nutritious fluids, but of secreting exhalations. The meshes are smaller when they do not contain grey matter; the texture, therefore, appears closer near the stems of medullary matter than at their circumference, where they expand to be combined with the grey, especially in the cerebellum.

As the grey matter has a much greater supply of blood-vessels than the white, they do not agree sufficiently for a very general combination, such as the

coalition of every grey particle with a white tube or filament. As the grey particles must be united to each other for forming centres or primitive sources of faculties, only some of them have a connection with the white matter, either for combining their functions, or for forming a communication with other centres, and with the organs of the body. If all the grey particles were conjoined with white tubes, and both were invested by the same condition of membrane, neither of them could be esteemed as pure and independent. It is probable that both have peculiar powers, according to their own aggregation and their separate investiture of membrane and vessels, but that some connection between them is required for the centre of every faculty, and especially for the full and perfect functions of the entire brain and spinal cord.

The grey matter having a molecular form of arrangement can be either dispersed or aggregated in larger or smaller quantities according to the purpose it is required to serve. In the various centres, as well as in the spinal cord, it is in the same condition as the sensory when the person is awake; it then allows the communication of sensorial qualities, and, to a certain extent, prevents or refuses to notice inferior impulses. In sleep or unconsciousness, although its sensorial powers are depressed so that it does not favour sensation or volition, it probably allows perceptions to be conveyed through it.

The condition of the white matter is very different from that of the grey. It is not aggregated in molecules, but in continuous tubes and fibres, forming meshes. It is not apparent that it is influenced much in sleep or unconsciousness, for then the nerves in which it most prevails are the most ready for receiving impulses,—as the optic, the auditory and common sentient, whilst the olfactory, which is so much covered with grey just before its division into branches, is not easily, if it can be at all, roused by scents, unless they at the same time affect the lungs, and deteriorate the blood so as to influence the sensory. Its exciting powers are increased by the addition of grey, but its conducting powers are modified and lessened accordingly. It has its conveying powers favoured by a smaller supply of blood, whilst the grey has its

exciting powers increased by a much larger one. By the differences of the grey and white two high animal powers are furnished, in some respects approaching each other, and agreeing for co-operation; they are, nevertheless, sufficiently peculiar for developing distinct modes of action.

If the nervous system, and especially its centres, were composed of only one kind of matter and membrane, there might be some modification by larger or smaller, or more or less intricate arrangements of fibres, but every impulse would then extend through the whole, and if the brain and other centres were large, the communication must consequently be sufficiently limited for preventing too great an impression, whilst all the impulses would be of the same simple kind, and probably not unlike those modified through the texture of nerves. Such a nervous system might suffice for very low animals, but would not be suitable for larger faculties in connection with very complicated bodies. If for animals having superior faculties the condition of the white had only been heightened by the addition of more exciting matter, it would still have allowed impulses to be conveyed in a too unlimited manner. A low conducting power was therefore required, and has been furnished through the molecular structure of the grey matter. Therefore, according to the form in which it is aggregated, and its present condition with respect to sleep, it may either allow or obstruct any impulses that reach it by the conveying white tracts. Thus, whilst by its exciting power it renders the nervous system more energetic, by its molecular structure, and consequently by its different conducting quality in forming the base of any centre, it can, to a certain extent, insulate the power of this, so that when in activity it shall not be offensive to, or interfere with, the functions of other centres, and convey such impulses only as are agreeable to the sensory. The larger its quantity and proportion the more exciting and independent will be any centre; and the larger and more pure the white tracts, the more free will be their capability of transmitting impulses. The grey, as a lower conductor of impulses than the white, and as the principal material agent of the sensory, does not convey the will, and

probably not common sensation, but only the modification of this faculty constituting perception.

The brain is usually formed of a surface of grey matter, with tracts consisting principally of white matter, approaching and departing to and from the nervous system generally. The grey matter is required also in greater or less proportions for evolving the peculiar faculties of the centres; it is also necessary for fitting the tracts to communicate properly with the centres and sensory; the white matter alone would convey discordant impulses, if it did not agree in having grey matter in proportion to the part of the sensory in communication with it.

A sentient centre is so constituted as to allow it to accept and modify internal impulses received from a sentient organ, and convey them to the sensory. A surface of white matter would suffice for it, and a very simple tract be necessary for conveying its impulses, but it must be modified by an intermixture with the grey, and according to the proportion and arrangement have higher or lower powers; but the larger the quantity the more diminished will be the capability of allowing the more simple and strong mechanical impulses. Grey matter does not appear to be ever used alone for nerves of common sensation; it can, in a considerable degree, convey the sense of smelling, and the unconscious perceptions of common sensitive nerves. When the person is awake, and the power of accepting sensation perfect, the grey matter connected with the roots of the nerves, and forming the posterior grey column of the spinal cord, is in the same condition as the grey matter of the sensory, and does not allow the transmission of perceptive impulses from sentient organs, as the higher faculty then involves the lower, which does not appear.

A motive centre is so constituted that it will give a stimulus to the muscles it is to actuate: it probably has not in itself anything very peculiar except sufficient grey and white matter for forming an adequate power, and so accurately placed as to allow an exact arrangement of the nervous roots for conveying from thence the excitement requisite for calling into action certain muscles; for its power motive by t have a

somewhat larger size for the origin and disposition of the nerves, and the nerves have a finer texture: it is not known by any functional power of change when it is insulated from the muscles, and it is only presumed to have such a faculty by the paralysis or convulsions ensuing on its injury. It cannot be very different from the perceptive centre, otherwise a perceptive impulse would not excite it: it animates the muscles, because they are in direct connection with it. The conveying tracts may have grey matter placed in the interstices of some of the descending fibres, but not so as to interrupt their course, and in this way they may be modified for qualifying impulses in accordance with the condition of the centres and sensory. Grey matter is not used, or very sparingly, in the construction of the nerves conveying motion after they have left their centres; and they are, with very few exceptions, connected with ganglia in the vertebrated animals.

A simple centre or nerve, formed either from white matter or in combination with grey, would probably answer either for perception or involuntary motion. A more simple construction of the spinal cord would have sufficed for these purposes in connection with less complicated organs; but great exactness is required for connecting it with the nerves and muscles and integuments, as they are at present constituted and arranged, and for allowing the various combinations in connection with the brain for the completion of the sensitive and voluntary faculties. More simple structures are formed through ganglia for perceptive and motive faculties, as in those of the sympathetic nerve, for actuating the viscera in which the perceptive and motive tissues are so closely connected. Other forms of ganglia preserve the full power of the large sentient nerves traversing them: they appear the most complex in man, and animals having the highest sensitive faculties, and may be presumed to exist for modifying the sensitive impulses, so that they may be in accordance with the sensory; nevertheless, it is not improbable that they prevent the possibility of conveying any improper impressions through the sensitive centres from the muscles in action, which they appear to be capable of doing from the

intimate connection of the voluntary and sensitive nerves in their course for distribution: this use with great probability also attaches to them, especially as the voluntary nerves are rarely included in ganglia; much, however, depends on the peculiar structure of these bodies, and not on their mere formal presence; for as they allow sensitive impressions to proceed to the sensory, so they may allow voluntary impulses to proceed from the sensory to the muscles, if they be appropriately formed as in invertebrated animals.

When the simplicity of the brain in the lowest class of vertebrated animals is considered in comparison with that of the highest, and that there are centres for the production of the same faculties with only a larger intellect in the highest, it is probable that the difference must lie principally in the regions of the brain destined for its exercise, and in a less degree in the sensitive and motive centres and tracts, which must necessarily be modified for agreeing with the power and capacity of the sensory, so that the nervous system may present an harmonious whole.

Centres may contain grey matter for perfecting them according to their required faculties; but more than this may be added without any other objects than those of insulating them sufficiently, and giving them an exciting power equal to that of the other centres, and the entire brain. Larger proportions of white matter will be present according to the magnitude of the brain, and the interposition of some grey matter may be required in the tracts: the conducting power may not be thus much increased, but only modified for joining larger centres and larger groups of convolutions, and agreeing generally with the entire brain. In animals of the same order, in which the intellect and other faculties are nearly similar, but which have a body and brain of different magnitude, it will be found that there are proportionate centres, tracts, and convolutions, so that in each the several parts agree in most respects except as to size: the larger brain does not produce any higher quality of intellect, or higher sensitive or other faculties, but only an amount of physical properties in proportion to the large size of the animal. In these examples the spinal cord, the

oblong medulla and crura of the brain, are continued of large but proportionate size to their combinations with the convolutions: in the largest, although there may be more extensive tracts and more grey matter in the interstices, there may not be a greater complexity. When, as in man, there is a moderate spinal cord and oblong medulla, the tracts leading from them may be even less; but when they diverge to be connected with the large sensory in comparison with that of the previously mentioned instances, there will be found a vast increase of conveying fibres interspersed with grey matter. The increase is in tracts attached to the parietes of ventricles; and especially in those above, and in connection with, the great commissure. The tracts may be coarser and less complex in animals, when the quantity of convolutions is not so large in proportion to them; there is then a more limited intellect in connection with great physical powers belonging to the centres of the nerves of a large body. In a very small brain, simply-constructed centres suffice for particular faculties; but they, as well as the spinal cord, may have some inferior qualities, otherwise the small brain would not be able to control them.

Much of the complexity of the structure of the brain will be readily understood and accounted for by considering that it is somewhat proportionate with the extent of the skeleton in each separate class of animals; that there are centres of similar sensitive and motive faculties, and a very small sensory in the lowest class; that there are centres of similar faculties with a large sensory in the highest class; that, when there is an extensive skeleton in the highest class, there is a brain bearing some proportion to it, especially in the same order; and when the skeleton is extensive, and the brain large, there are, besides larger centres, increased tracts of white matter and an increased quantity of grey for equalizing their powers with those of the entire brain, and that there are regions to a considerable extent superadded, through which the intellect acts in concert with the other centres.

6, Tavistock Square,
April 18th, 1850.

MEDICAL GAZETTE.

FRIDAY, MAY 17, 1850.

WE have this week devoted a considerable portion of our space to various memorials and documents in reference to Medical Reform. We need hardly say that at the present moment these are deserving of the consideration of every member of the profession. Two important suggestions have now been made to the Secretary of State: the one involving the incorporation of a new college—the other advocating a new charter to the College of Surgeons, based upon what is stated to be a more liberal and just consideration of the claims of its members. Of the proposed new college we have already expressed our opinion. We do not believe that there is any likelihood of a new institution being created by the Crown, with powers such as those demanded by its advocates. The conflicting views which are well known to exist respecting the propriety of adding another to the numerous licensing bodies of Great Britain, would suffice to arrest the hand of any minister in making such a concession; and from the experience which Sir GEORGE GRAY has acquired by the reiterated attempts at medical legislation, and by the total failure of his predecessor, it is not likely that he will commit himself to any course which will not command the assent of a large majority of the profession—a majority consisting not merely of numbers, but of men of experience and standing. Should this party succeed in their object, we predict that the present Colleges of Physicians and Surgeons will still go on with

and that the new In-

stitution will be a modified Apothecaries' Hall, inferior to both.

The memorial addressed to the Minister by the Master and Wardens of the Apothecaries' Society, points to some such termination of the contest as that at which we have above hinted. They expressly declare, that "they will never *voluntarily* relinquish the performance of their duties, but under the strongest conviction that the public will be benefited by the change in the law which would transfer those duties to other hands." Again, they tell Sir G. GRAY that from their experience of the actual working of the law under which they hold their powers, they are fully sensible of its defects; and further, that they are prepared to lay before him "such suggestions for the amendment of the Act as would, in their opinion, go far to remove the objections which exist to its provisions, and would at least remove many of the impediments in the way of a satisfactory settlement of the complicated question of medical reform, not only as regards England and Wales, but the Kingdom at large."

It would be desirable to know the nature of the amendments which it is thus proposed to introduce into the Apothecaries' Act; because this is a question not merely between the Minister and the Society, but between the Society and the profession at large. It is just as important that the profession should have the power of judging beforehand of the utility and practicability of the proposed changes, as of the terms of the new charter which the Crown is invited to grant to the Royal College of Surgeons. In the present very unsettled state of affairs, we trust that the Society will not hesitate to publish their remedy. It may contain a solution of our present difficulties, and enable the Hall, in its improved state, and the two Colleges, to go on in greater harmony than hitherto. The College

of Surgeons will not concede a power of examining in surgery; and, on the other hand, so long as the Hall continues, the College will not claim a power of examining candidates in medicine, midwifery, and materia medica. On other points the two corporations can, no doubt, come to a cordial understanding. There is no reason why practice throughout the empire should not be thrown open in adopting uniformity of education and examination. We can perceive no other plan than this for reconciling that section of the profession which is opposed to, with that which is in favour of, a new incorporation. The only ground upon which the two parties can meet is a modification of the Apothecaries' Act.

The propositions submitted to Sir GEORGE GREY by a numerous deputation, representing various associations of provincial medical practitioners, are to the following effect:—

"1. That the Colleges of Physicians and Surgeons, once placed in just and harmonious relation with their respective members, and re-organised so as to ensure uniformity and sufficiency of education to all, are amply sufficient for the requirements of the medical profession in England; and that the institution of a College of General Practitioners, under such circumstances, would be a needless complication, prejudicial to the interests of the profession and the public.

"2. That the Charter granted to the College of Surgeons in 1843, forms the principal obstacle in the path of medical legislation; and that the recent alteration of the said Charter proposed by the Council of the College of Surgeons is insufficient, unsatisfactory, and unjust; as also the resolutions of the Council of April 23d, 1850.

"3. That all who were members of the College prior to the Charter of 1843, as they attain respectively a standing of fifteen years, shall be admitted to the fellowship; and that fellows resident in the provinces be eligible to the Council, of which they may constitute one-third part.

"4. That as no fee was demanded from those on whom the fellowship of the College was originally conferred, those who were members in 1843 claim the fellowship on the same terms

"5. That in the election of the Council the fellows resident in the country shall have the privilege of voting by balloting-papers.

"6. That all who shall enter the profession after the passing of the proposed Act shall be registered by no other title than that of physician or surgeon; and that such gentlemen as are now in practice shall be registered according to their respective qualifications.

WATSON BEEVER,
Chairman.

These propositions are said to represent the views of a very large number of provincial medical practitioners, and to embrace, in the most essential points, the opinions of nearly 2000 members of the Provincial Medical and Surgical Association. As such they are entitled to that consideration which they will no doubt receive at the hands of the Government. We cannot but regard them as fatal to the proposed institution of a College of General Practitioners; and if this scheme be persisted in, we ought to have some plain announcement of the names of those who give it their support. One test of professional feeling on the subject would be the presentation of a numerously signed petition to the House of Commons, each individual in favour of a new college being required to attach to the document, not only his name, but his qualification and residence.

In the absence of any legal registration of the medical practitioners of England and Wales, all sorts of liberties have been taken with the numbers who were said to be in favour of some prominent scheme of the day. At one time it was alleged that there were 20,000 general practitioners thirsting for the destruction of the Colleges,—then the numbers suddenly sank to 13,000, and they have at length come down to a

respectable moiety of about 10,000 or 12,000. We have elsewhere* tabulated the statistics of the profession in the metropolis and provinces upon the figures furnished by Dr. Edwards Crisp; and our readers will perceive from an examination of these tables that the most gross exaggerations have prevailed on the relative numbers in the profession—each person making use of figures *ad libitum*, thinking himself quite safe from contradiction, by reason of there being no legal record to confute his statements. Dr. E. Crisp, it is true, has taken his summary of the number and qualifications of practitioners from the Medical Directory; but his monthly publication shows him to be a bitter enemy of the two Colleges, and he is therefore not likely to have erred in his calculations from any favour to them. Further, we are ready to admit that the whole of the members of the profession are not probably registered in the Directory; but making the fullest allowance for casual omissions, the conclusions drawn from the relative numbers are not likely to be materially affected.

It will be seen by reference to our calculations that there are not in England and Wales more than 10,947 medical practitioners of all kinds. If we take a regular "General practitioner" to signify one who has the qualifications of both College and Hall, there are in the profession 4633, *i. e.*, less than half as many as are claimed by Mr. Clifton to be in favour of a new incorporation! Mr. Bottomley states that he represents as many as 3000 who are decidedly adverse to a new College. We shall leave Mr. Clifton and Mr. Bottomley to reconcile these conflicting statements; and content ourselves with expressing our belief that those in favour of a new College, if the whole of the general prac-

titioners were fairly polled, would be found to be in a minority. One circumstance connected with these tables, however, brings out the disastrous results of the present continued conflict among our medical corporations. There are 1038 gentlemen possessed only of the license of the Hall, and therefore in law only *apothecaries*, who are practising as *surgeons*; and for whose knowledge of anatomy and surgery by education and examination, the public has no guarantee whatever; while on the other hand, there are 1663 gentlemen possessed only of the diploma of the College, who are practising medicine and midwifery, but have undergone no examination in those subjects or in pharmacy; and for whose competency to practise with safety in these branches of the profession, there is an absence of all proof. This state of things should not be allowed to continue. Until the differences among the corporations be adjusted, no person should be licensed for practice who has not passed the *two* examinations. The Society of Apothecaries are in this respect more negligent of the interests of the public than the College of Surgeons. They do not even require from the candidates for their license, attendance on surgical practice or lectures. They thus discard *surgery* altogether, although they know that their licentiates can and do profess to practise as surgeons without the College diploma; and our tables prove that at least 1038 of their licentiates are at the present time thus practising, throughout England and Wales, a branch of the profession to which they have not been required by their regulations to give any attention whatever. It is worthy of remark, as a contrast, that although at the College of Surgeons they do not examine on the subjects of a *medical* education, the regulations compel the student to attend all the lectures and practice which can alone supply him

* See page 867.

with the necessary knowledge of his profession.

It is disgraceful to our law, that this "general" practice with a *half qualification* should be suffered to continue. Whatever may ultimately become of the present schemes of medical reform, this defect in our medical polity would admit of an easy and speedy adjustment. So far as the present aspect of affairs will enable us to judge, the session is too far advanced to allow of the enactment of any complete legislative measure on the remodelling of the profession. All that we can expect is that a draught of a new Charter for the Royal College of Surgeons will, according to the promise made by Sir George Grey, be laid before the profession for its final judgment. In the interim the minister will endeavour to reconcile the recent resolutions of the College with the views entertained by the Provincial practitioners, so that the causes of disagreement may be either made to disappear, or be reduced within the smallest compass. If, after this, both parties be dissatisfied, and neither will give way to the other, the only course which will be open to him will be to introduce some improvements into the Apothecaries' Act, and postpone the question of medical reform for the consideration of some minister of a future Cabinet. That Sir George Grey will agree to any legislation, either coercive of the College of Surgeons and against the views of a large proportion of its Fellows and Members, or in opposition to the strongly expressed wishes of a numerous and respectable section of the profession, is not at all probable. Hence, but for some fortuitous concession on one side or the other, we are as far off as ever from medical legislation.

Reviews.

Of the Causes, Nature, and Treatment of Palsy and Apoplexy; of the Forms, Seats, Complications, and Morbid Relations of Paralytic and Apoplectic Diseases. By JAMES COPLAND, M.D., F.R.S., &c. &c. 8vo. pp. 424. London: Longman & Co. 1850.

As introductory to our notice thereof, we give the author's reasons for the publication of the present treatise:—

"A considerable portion of the following treatise was published many years ago in the first and third volumes of the author's *Dictionary of Practical Medicine*, and several of the chapters on the Connexion of Paralytic and Apoplectic seizures, with other Disorders, formed the Croonian Lectures for 1846 and 1847, at the Royal College of Physicians. The author now publishes the whole in a connected form, believing that palsy and apoplexy should be studied in intimate connexion, not only with each other, but also with other diseases, of which they are often the consequences and terminations, and with other affections which are frequently associated or complicated with them."—(*Preface*).

It is, then, to point out, in reference to palsy and apoplexy, "the relations, associations, and complications," of those forms of disease, as well as "the various causes, circumstances, and combinations of causes, which either occasion them, or influence their course," that the author has felt called upon to publish a separate treatise; and we need scarcely inform our readers that these objects are completely attained in all points of the history of the two diseases with which it is more especially concerned. This will be seen by a glance at the contents of the seven sections into which the work is divided. Thus:—

1. Of the less complicated forms of palsy, or primary and simple palsy.
2. The uncomplicated forms of apoplexy, or primary and simple apoplexy.
3. Of the association of palsy and of apoplexy with each other.
4. Of several diseases often preceding, inducing, and complicating apoplexy and palsy.
5. The diagnosis and prognosis of apoplexy and palsy.
6. The remote causes, or contingent occasions, and pathological states, producing palsy and apoplexy.

7. Of the treatment of palsy and apoplexy.

Dr. Copland has, in our opinion, effected for apoplexy and palsy, in the discussion of the various topics involved in these several sections, what Prout has effected for diseases of the urinary organs, Brodie for diseases of the joints, Latham for diseases of the heart, Mackenzie for diseases of the eye, Lawrence for hernia, Lee for uterine puerperal inflammations, and many others in their distinct departments. He has brought together every important fact in their history, and has presented to his professional brethren a perfect digest of all that has been said or written worth the repeating on these two forms of disease. So full and complete is every part of this treatise that we have found ourselves embarrassed in the selection of extracts to submit to our readers' notice. In fact, the first five sections almost absolutely forbid such mutilation, and we have therefore passed these over, and have selected the two last sections,—those on the pathology and treatment of these diseases,—for our observations and quotations.

On one point of the pathology of apoplexy the author observes:—

"The opinion that the disease depends upon compression solely has been too generally adopted, without considering the relation in which such compression, granting its existence, stands in to the causes which occasioned it, and the symptoms it produces. The idea that compression is indispensable to the existence of the disease has thus been empirically assumed and acted upon in practice. A careful consideration, however, of the morbid appearances on dissection, in relation to the symptoms, and to analogous changes and their phenomena, have led me to infer that compression of the brain never can take place; and that, although pressure may exist in the majority of cases, it is not indispensable to the apoplectic state. Admitting that retarded circulation, whether produced by pressure or by any other cause, very frequently obtains in the apoplectic state, it does not follow that it constitutes the only morbid condition of the brain in this disease, or, in other words, that apoplexy is not merely a disease of the vessels of the brain, although these vessels are either consecutively or coetaneously affected. It should not, however, be overlooked that even those who argue for compression being the cause, do not thereby imply, as their opponents would make it appear, that the tissue of the brain is actually compress-

sible, but contend for the effects which pressure undoubtedly produces upon living and sensible parts. Therefore, although the brain is not compressible, it does not follow that it may not be affected by pressure, even independently of the obvious effects which pressure must produce on its vessels, and the circulation through them, and notwithstanding the protecting influence of the cerebro-spinal fluid" (p. 378).

The proximate cause of those disorders of the cerebral circulation which give rise to apoplexy, is traced by the author to a morbid condition of that part of the ganglial system which supplies the bloodvessels of the brain, and the brain itself. All the phenomena preceding, attending, and following a large proportion of the attacks, afford confirmation of this view.

There are certain phenomena presented in palsy which have given rise to much diversity of opinion among pathologists; among these are the involuntary movements of the paralysed limb, relaxation of the sphincters, movements during sleep, &c. &c. Dr. Copland contends that the researches of Stilling, Van Deen, Budge, and others (among the latter we would include the author himself), sufficiently "account for those involuntary movements which are produced in a paralysed limb when the surface of it is irritated, pinched, or tickled."

We quote the author's representation of these researches:—

"The spinal cord consists—firstly, of perpendicular fibrils, forming the white substance of it; secondly, of transverse fibrils, and of very delicate longitudinal fibrils, constituting the cineritious or grey substance of the cord, the transverse fibrils crossing at right angles, and forming a network with the longitudinal, both of the grey and of the white substance; thirdly, of corpuscles, of an angular form, with nucleated or projecting processes, scattered in groups through the anterior grey matter only, and most numerous at the origin of the anterior roots of the nerves; fourthly, of transverse fibres passing directly from the posterior to the anterior grey substance of the cord."

"Dr. Stilling traced fibrils from the posterior roots to the anterior grey masses: and fibrils, almost as soon as they enter the cord, run behind bundles of fibrils of white substance to join other bundles of fibrils from adjoining nerves. Others, in fasciculi, form loops with fibrils coming from the next nerve; and others appear as

continuations of the transverse rag-like fibrils of the posterior grey substance, while the connection of the anterior roots with the anterior grey substance is still more distinct. The nucleated processes or corpuscles of this substance are in immediate connection with the primitive fibrils of the roots of the nerves." (p. 310.)

This description of the spinal cord, our readers may observe, omits all notice of Mr. Grainger's supposed demonstrated tract, or true spinal cord, to the existence of which is referred the explanation of the phenomena embraced by Dr. M. Hall's *reflex* theory, and through which Dr. Hall accounts for the involuntary movements of paralysed limbs.

Dr. Copland observes, with regard to the *reflex* theory of the structure of the cord—

"No such mechanism exists, for these actions are sympathetic, and result from the conformation of this part of the nervous system, transverse fibrils passing, as shown by the anatomists just referred to, directly from the posterior to the anterior grey substance, to convey impressions from the sensitive fibrils, and to excite the roots of the motor nerves. That no appropriate and peculiar structure exists in the cord for the purpose of performing these sympathetic or reflex movements, beyond what has now been noticed, is the opinion not only of the author, but also of the writers already mentioned, as well as of many others who have investigated the subject." (p. 312.)

The *irritability* of muscles, which is also intimately connected with these phenomena, is by Dr. Copland considered to proceed from and depend upon the organic or ganglial nervous system; while Dr. M. Hall contends that the spinal cord is the source of muscular irritability.

Dr. Copland examines, also, other phenomena of the so-called *reflex functions* of the cord, as connected with the subject of palsy and apoplexy, and explains them by reference to the ganglial nervous system, and its connection with the cerebro-spinal system.

In the last section of his work, Dr. Copland introduces the subject of treatment, by truly observing that there are no diseases which require greater discrimination and judgment in their appropriate means of cure, than those under our consideration.

"According to the nature of the morbid actions and organic lesions, which occasion

these maladies, not merely modified or different, but even very opposite agents are required. Even when the states of the disease may appear identical to the un-instructed observer, yet to the learned, the experienced, the close and discriminating physician, these states may furnish indications requiring very different, or even opposite plans and measures of cure." (p. 328.)

Dr. Copland in the first place treats of the means which should be employed when an attack of palsy or apoplexy is threatened; and then proceeds to consider the treatment of the different states and complications of apoplexy.

While speaking of the adoption of bloodletting by some, and of the employment of stimulants by others, in the attack of apoplexy—the advocates of one or the other boasting at the same time their success—Dr. Copland justly remarks:—

"But if we examine into their success, we shall find, perhaps, that some difference as to degree may exist; and that, whilst many patients seem benefited, others experience no relief, if they be not actually injured by the kind of practice thus exclusively adopted." (p. 340.)

On this same topic the author also observes:—

"There is, however, one part of the treatment which is more or less adopted by all: this is the use of purgatives; which, when judiciously administered, are the most generally applicable and beneficial of all the means usually advised."

With regard to treatment in general, the following remark may be borne in mind:—

"But the skilful practitioner is guided in the treatment he adopts by considerations, circumstances, and appearances, which scarcely admit of description; and all attempts to impart his knowledge come far short of his wishes." (p. 340.)

Where no depression of vascular action, or exhaustion of vital power, exists, Dr. Copland advises depletion—the extent to which this is to be carried varying of course with the habits and constitution of the patient: *e. g.*,

"An intermitting or irregular pulse has very justly led practitioners to hesitate as to the employment of blood-letting. But a single symptom is not to guide us in the use of this or any other remedy. If, conjoined with either of these states, there be slowness or fulness of pulse, stertorous or strong breathing, constitutional vigour and

fulness of habit, tumid, flushed, or livid countenance, blood-letting, even to a very considerable extent—either general or local, or both—may be practised; but when, with irregularity and intermission, the pulse is also small, weak, or quick, the countenance pale, the temperature of the head either not increased or somewhat depressed, and the respiration weak rather than strong, blood-letting would be highly injurious: a very opposite treatment is called for." (p. 342.)

By blood-letting Dr. Copland does not refer exclusively to venesection, but expresses all the various means of local depletion. The author points out that the employment of these means, in one form or other, is called for at the time of the development of reaction, which if allowed to proceed would either increase hæmorrhage or disorganization, or superinduce inflammation.

The employment of active purgation, the application of cold to the head, and of warmth to the legs and feet, and the subsequent general treatment, are considered in detail by the author.

The treatment of the several forms and complications of palsy forms the subject of the next chapter.

The means advised have a special reference to the morbid changes upon which the several forms depend. Mention is made chiefly of those remedies of which the author himself has had more or less experience. Blood-letting, evacuants, purgatives, diuretics, alteratives, stimulants, tonics, and electricity, are among these. We extract the author's observations on the last named means:—

"I have had several opportunities of employing electricity in the treatment of paralysis, chiefly in the form of shocks from the Leyden jar, of sparks from the part effected, and of the electro-magnetic current. When active disease exists in the nervous centres, and when it may be inferred that the palsy is consequent upon softening of a portion of those centres, or upon disease of the blood-vessels supplying such portion, electricity, galvanism, and electro-magnetism, are then inefficacious, and they may then even be injurious. They are manifestly inapplicable when there are spasms or contractions, or cramps in a limb, when there is augmented or morbid sensibility of the surface or of a limb, when the head is hot or the face flushed, with or without headache, when the pulse is at all excited, or the temperature of the surface increased. If the paralysis has been preceded, or is attended by neuralgic pains,

electricity in any form should not be employed. Dr. Golding Bird considers that it may be resorted to with advantage in cases of lead-palsy; in paralysis produced by cold; in palsy limited to the portio dura; in paralysis following local injury to a limb; in hysterical and anæmic palsy; in local anæsthesia, and in cases caused by chronic or persistent lesion in the cerebro-spinal axis. In this last stage of the disease electricity may, however, be either injurious or beneficial; for, if either the pathological states just mentioned, or the symptoms contra-indicating its use, be present, it may be injurious. In one of the most frequent forms of *paraplegia*—that consequent upon chronic inflammation of the membranes of the spinal cord—I have had recourse to it with the precautions just alluded to. In one such case it appeared to be injurious. When symptoms of active inflammation can be referred to these parts, this agent is out of the question." (p. 402.)

The author concludes his treatise with the consideration of consecutive treatment, or the prevention of a return or exacerbation of the disease.

Upon this treatise we must bestow unqualified commendation, and we advise every practitioner of medicine to add it to his library. But we cannot refrain from expressing some regret that Dr. Copland should have devoted his time and attention to the preparation of a work like this, while a still more important work, the Dictionary of Practical Medicine, remains unfinished: we feel the more regret, too, because the first part of this Dictionary contains a full article on *Apoplexy*, which appeared so long ago as the year 1835. The author will pardon our reminding him that he has entered into an implied contract with his professional brethren, for the completion of his Dictionary, from which, on account of the value of the Parts already published, they will not be willing to release him.

We should not care to express any opinion on this subject, if the published numbers of the Dictionary of Practical Medicine were mere ordinary compilations, instead of being collections of essays unparalleled for learned research and practical value. We would here, then, again repeat the often expressed desire, that Dr. Copland will not suffer any avoidable engagements to interfere with the completion of his gigantic undertaking.

Outlines of Medical Proof, revised and corrected. By THOMAS MAYO, F.R.S &c. Pamphlet. Small 8vo. pp. 84. London: Longman and Co. 1850.

DR. MAYO has here reprinted, in a revised and corrected form, the various essays which he has published under the title of *Outlines of Medical Proof*. We have already had occasion to speak favourably of these essays. They are eminently calculated to improve medical reasoning, and to aid medical research. The great difficulty which a practitioner has to combat in the present day is how to observe, and profit by his observation. Medical theories frequently turn out to have no substantial basis; and medical facts, as they are called, when closely sifted, prove to be no facts at all. Hence, from imperfect observation, and an erroneous record of experience, one practitioner, like an *ignis fatuus*, may lead his professional brethren into a swamp of error. Every one, with common attention, and with a mind free from prejudice, can observe a series of facts in disease, but there are few who are capable of reasoning from them correctly. Hence the constant recommendation of particular modes of treatment, which, when investigated, are proved to have been derived from too limited a number of observations. It is in supplying logical accuracy, which is so much needed by practitioners, that Dr. Mayo's pamphlet will be found most serviceable. The first six chapters may be read by all with profit and instruction.

The Retrospect of Medicine. By W. BRAITHWAITE. Vols. XIX. and XX. —Jan. to Dec. 1849. London: Simpkin and Co.

The Half-yearly Abstract of the Medical Sciences. By W. H. RANKING, M.D. Cantab. Vols. 9 and 10. —Jan. to Dec. 1849. London: Churchill.

Monthly Retrospect of the Medical Sciences. Edited by GEORGE E. DAY, M.D., ALEXANDER FLEMING, M.D., and W. T. GAIRDNER, M.D. Jan. to Dec. 1849. 8vo. pp. 258. Edinburgh: Sutherland. London: Churchill.

Two of these works are already well known to the profession. The last is new as a separate publication; but as having constituted a part of the Edinburgh Monthly Journal it is familiar to most of our readers.

These "Retrospects" present to their readers a very good selection of extracts from the articles contained in other periodicals. This necessarily imperfect abstract may nevertheless save from sinking very much below the level of the present state of medical science, those who may not enjoy time, opportunity, or inclination, for more extensive reading.

Mr. Braithwaite's volumes consist, as hitherto, of "selections" from the journals. Dr. Ranking's "Abstract" partakes in part of the character of a review as well as that of a retrospective analysis of other journals.

The "Monthly Retrospect" labours under the great disadvantage that, by its separation from its original volumes, it parts company with all the valuable and elaborate articles contributed to the Edinburgh Monthly Journal by some of the most eminent members of our profession, both in Scotland and England. So far, also, an injustice is done to these contributors, although it is more than probable that the authors may not be much concerned at their exclusion from works of this character. We are quite convinced, from some experience in journalism, that (for juniors especially) much more solid and available practical information may be gathered from the study of a few well-selected journals, British and Foreign, than from the *indigestion* of the detached extracts contained in professed retrospects, abstracts, &c., in which it is not possible fairly to represent the views of all the authors from whose labours they are compiled.

The Druggist's General Receipt-Book: comprising a copious Veterinary Formulary, Patent and Proprietary Medicines, &c. By HENRY BEASLEY. 12mo. pp. 424. London: Churchill. 1850.

ONE-HALF of this little volume is occupied with formulæ for horse and dog medicines, and the other half contains recipes of patent medicines,—articles of perfumery,—hair-dyes, cosmetics, and miscellaneous preparations. We are unable to speak to the correctness of many of these formulæ; but the author has evidently taken great pains in accumulating them, and placing them before the public in a concise and intelligible

seem. We have no doubt from our examination of it that this will be found a useful book of reference. Mr. Beasley is already favourably known to the profession by his useful *Synopsis of the British and Foreign Pharmacopœias*.

Proceedings of Societies.

ACADEMY OF SCIENCES, PARIS.

April 22 and 29, 1896.

On the Alteration of Water in Wells.

AN essay was presented by M. BLONDEAU, of Rodez, on the alteration of water in wells, considered in a hygienic point of view. From an extensive series of analyses, the author drew the following conclusions:—

1. The sources of alteration are mineral ingredients and animal matters.

2. The mineral ingredients are silica, lime, alumina, magnesia, potash, and soda. The salts of these bases are not injurious to the health, if not present in a greater proportion than five or six grains to the pint. The proportion of fifteen grains to the pint will not be found prejudicial to health, although it will render the water unfit for culinary purposes.

3. The quantity of animal matters contained in the water of a well is of great importance, as, when they exceed the proportion given, they exercise an injurious influence on the animal economy, producing dysentery and other diseases which may appear contagious from their cause being common to a large number of persons.

4. The earthy flavour of some waters is owing to the presence of alumina held in solution by carbonic acid.

5. The classification of waters for purposes of drinking, founded on the proportions of the chlorides and sulphates, is erroneous, since these proportions are liable to variation in the same kind of water, from the addition of other saline matters they may meet with in their course either above or below the surface of the soil.

Existence of Iodides and Bromides in the Thermal Springs of Dax.

M. VICTOR NEYRAC stated that a plant of the family *Ocellularia* grows most abundantly on the sulphate and carbonate of lime deposited from the water, of the springs of Dax (in Landes), having a temperature of 140° F., and from which a large quantity of nitrogen is constantly disengaged. The analysis of this

plant, which has been named the *Anabaina Thermalis*, yields iodine and bromine. The same fact has been ascertained with regard to several other *Ocellularia* which are found in thermal springs in the vicinity of the town of Dax.

Employment of Oxygen in Poisoning from Chloroform.

M. DUROY transmitted a paper in which he stated that oxygen inhaled at the same time with chloroform weakens and retards its action, and controls its narcotic influence: that, by its chemical action on the non-arterialized blood, it must be regarded as the natural antidote to the state of asphyxia, whether caused by the vapour of chloroform, or by carbonic acid, or by any other deleterious gas. On these grounds, M. Duroy advises the administration of oxygen gas after the inhalation of chloroform, in order to remove its effects immediately that the occasion for anæsthetic action has ceased.

[*.* The author overlooks the fact that, in the deaths from chloroform which have been recorded, the fatal result has been referrible to the directly poisonous action of this agent on the heart, rather than to the immediate production of asphyxia.]

Morbific Influence of Vaccination.

M. BAYARD (of Crey-sur-Blaise), in a note which he addressed to the Academy, attributed the greater frequency of typhoid diseases, and a higher mortality of adult age, to the influence of vaccination!

[*.* We shall only remark on this communication, that the author must be singularly ignorant of history, as well as of statistics.]

Causes of Goitre and Cretinism.

M. GRANGE (of Geneva) announced several facts in confirmation of an opinion formerly expressed by him, that Goitre and Cretinism occur independently of meteorological or orographic conditions, and that a connection exists between their prevalence and the existence of magnesian earths and salts in the soil and water of certain districts. The author submitted a map of France, which showed, contrary to the generally received opinion, that goitre is widely spread over extensive plains, and that it is met with in districts possessing the most opposite topographical features, and at various elevations above the level of the sea.

M. Grange states that he has observed no relation between scrofula and goitre. The author also added that the affection is unknown in the districts of the Seine, the

* Spec, a mountain.

Loire, and the Gironde, the waters of which rivers show a deficiency of magnesian salts.

••• It would require an extensive series of observations to support the ingenious view here brought forward by M. Grange in favour of the dependence of Goitre and Cretinism on the presence of magnesia in terrestrial waters. The correctness of this theory must be tested by observations in all countries, and not by a few scattered facts derived from the territories of France and Switzerland. The waters of the wells in the Holy Land, in Lower Egypt, and along the shores of the Red Sea, abound in magnesian salts, but we have no information that goitre is there prevalent. There are some parts of England in which goitre is unknown, where the well-water contains an undue proportion of magnesian salts; while there are other districts in which the disease prevails, but, so far as we can ascertain, there is no undue preponderance of magnesian salts in the water. We fear, therefore, that we must regard this as a somewhat hasty generalization based upon too limited a number of observations.

SURGICAL SOCIETY OF PARIS.

April 24 and May 1, 1850.

THE discussion was resumed on M. Robert's proposition, never to reduce the protruded omentum in wounds of the abdomen. The same arguments were advanced as on the previous occasion, and the question was left in the state of a simple hypothesis.

Treatment of Erectile Venous Tumors by Vaccination.

M. MARJOLIN related the case of an infant, six weeks old, the subject of a venous erectile tumor, extending over half the head and face, and implicating the mucous membrane of the cheek and palate on one side, but not extending beyond the middle line. This patient had been submitted to the Society on a former occasion, and it had been unanimously agreed that the case was beyond the reach of art. The child not having been vaccinated, M. Marjolin had determined on making trial of this means. He had vaccinated the child, not on the tumor, but around its margins. The result had been most satisfactory, the

cure being almost complete: only a slight tumefaction remained on the eyelid and on the palate. The child had a few days since fallen down and bruised its forehead, without any hemorrhage having followed.

A discussion took place on the general question of vaccination in cases of erectile tumors. Several members considered that the cure in M. Marjolin's case was the result of common inflammation, which might have been produced by any other cause than vaccination; and even in this case M. Chassaignac attributed the result to a fall which had happened to this child about the same time that vaccination had been performed.

Hospital and Infirmary Reports.

FELLOWS' PRIZE REPORTS

OF

CASES OCCURRING IN UNIVERSITY
COLLEGE HOSPITAL,
SUMMER SESSION 1846.

By C. H. F. ROUTH, M.D. Lond.

[Continued from p. 836.]

Remarks on the Cases of Sarah Hicks, Charles Pithers, and Ety Lock.

THE diagnosis in these three cases was easy. There was inflammation of the joints, and general pyrexia. The disease was therefore either rheumatism or gout.

1st.—As far as the causes were concerned, they were favourable to the first supposition.

a. In all, the hereditary predisposition to rheumatism existed, for although Pithers' father and mother had never had rheumatism, the father had had *gravel* frequently, and the sister rheumatism on two occasions.

b. In all three it had been brought on by wet and fatigue, the common causes of rheumatism.

c. The station of life of each: rheumatism is the common disease of the poor, as gout is of the rich.

d. Their ages: gout seldom occurs before 30 or 40. The great majority of cases of rheumatism occur between 15 and 30.

2d.—The present symptoms were characteristic of rheumatism. The migratory character of the inflammation; the fact that the inflammation was not confined to the ankles and joints of the feet, as is the case with gout; that the larger joints were affected chiefly; and the *sour sweats*—a

symptom almost characteristic of rheumatism, absent in gout, where the skin is often dry, and found perhaps only besides in a few cases of delirium tremens,—all were symptoms, which left no doubt as to the disease being rheumatism.

In the case of Pithers, however, it might admit of doubt whether gout might not have coexisted. There was œdema of the right forearm, and this is a rare complication in pure rheumatism, and he was bordering on that age when gout becomes more common: moreover, he was very intemperate, a frequent cause of gout; and, lastly, the fever was never very high, as is most common in rheumatism. There could be no doubt that the disease in the man was rheumatism, but modified somewhat by the presence of symptoms of gout.

II. In the three cases pericarditis was present. A comparison of the leading symptoms of the pericarditis in each on their admission may not prove uninteresting.

1. The impulse in all was increased, chiefly, it is true, in the case of Lock, but he had also endocarditic disease. 2. The pain was referred in all, not to the cardiac region, but to below the margin of the left ribs. This is the common case. 3. A slight tremor near the heart was felt in both Pithers and Lock, but chiefly in the latter, where valvular disease probably existed, or the longer duration of the disease might have given rise to it. It was only heard subsequently to the production of mitral disease in the case of Hicks.

4. Both in Lock and Pithers the cardiac dulness was observed to alter its position to an unusual extent with the change of the patient's position. This symptom probably also existed in the case of Pithers, but was not observed till the 24th April, four days after admission. We believe this symptom of pericarditic effusion was first noted by Dr. Quain.

5. In both Pithers and Lock the friction sound was not heard in the neck. The observation was unfortunately not made in the case of Hicks.

6. In all it was a double friction sound, heard during the systole.

7. In all it was heard quite independently of respiration.

8. In all the pain at the hypochondrium and epigastrium was increased by coughing or a deep inspiration, or by decubitus on the left side. In the case of Hicks, whose sensations were unusually acute, decubitus on either side for the same reason was painful.

The above symptoms are essentially those of pericarditis; the only other affection with which this disease might be complicated being pleuritis. In both we

have the pains on deep inspiration, quickened respiration, and double friction sound; yet in pleuritis the sound is not heard except during respiration. In pericarditis it is heard independently of it.

III. In both the cases of Lock and Pithers there was probably some hepatic congestion. The extreme obesity of Hicks made the determination of this point impossible. In the case of Lock there was icterus present besides, and some albuminuria.

Progress and treatment.—It is usual in all cases of pericarditis, occurring in connexion with rheumatism, to carry out a rigorous antiphlogistic treatment. Calomel, tartar emetic, and opium, combined with local and general bloodletting, have been found most beneficial; at the same time as the administration of colchicum and antacids are useful, the former as checking in the constitution the formation of lithic acid, and the latter as neutralizing the excess of acid already present.

We consider the progress of each case in detail:—

1. The rheumatic symptoms by themselves, presented, in the case of Pithers, nothing of much interest.

2. In relation to the pericarditis. The symptoms of pericarditic effusion were evident on the 23d. The intercostal spaces on the left side were less marked than on the right. On the 24th the limits of the effusion were traced superiorly to extend to the third rib, the transverse diameter not being increased. This last circumstance is important as diagnostic between engorgement and pericarditic effusion, in the latter the enlargement being chiefly transverse. With this effusion the friction sound became less audible, and gradually became less so, till on the 26th it was no longer heard. On that day, however, a single friction sound was heard. Was it due to the pericarditis, a single friction sound being heard occasionally, or to endocarditis having set in? We know the diagnosis between a murmur and friction sound is sometimes impossible; still, as it was heard at the top of the sternum, and faintly in the neck, and that from the 28th to the 1st of May, the first sound at the base was distinctly prolonged, this prolongation of the sound being also heard at the top of the sternum, which is not the case with friction sounds, the probability was it was a systolic murmur. Was this murmur anæmic or endocarditic? We are not aware of any quality of the sounds by which these two may be distinguished; but if it was endocarditic it is interesting as coming on while he was taking mercury, but ceasing the moment his gums were touched.

3. From the first there appeared to be

some slight affection of the lung. There was dulness under both clavicles, especially the right. On the 23d the cardiac friction sound was heard in the right back, probably from some consolidation. On the 25th the dulness was more marked and extended; and on the 6th May the respiration was almost bronchial in the right supra-spinous fossa; fine crepitation was not heard—what was occasionally heard was large. On what did this symptom depend? Was there tubercle? His mode of life made him particularly obnoxious to this disease, but there had been no other active signs of it; he was not liable to coughs. Then there was some increase in the degree of consolidation, which, as the case progressed, again disappeared. There was, moreover, no previous pneumonia to look to to account for the original consolidation. While, therefore, it could not be positively stated whether tubercle or pneumonia existed, still it appeared probable the consolidation might have been nothing more than mere congestion, similar to what had occurred in some of the other organs.

The state of the *urine* in this patient presented nothing very remarkable. The quantity of solid matter excreted in the twenty-four hours gradually increased as he got better. It was deficient only at the outset of the disease, and when he was on low diet. On the 21st, the 2d and 3d April, pink lithates were observed. The presence of purpura of ammonia, on which this pink tinge depends, is said to indicate disease of the liver. The liver certainly on his admission was slightly congested.

Duration of the disease.—Of the rheumatism, twenty-seven days. Pericarditis, about thirteen days; of the endocarditis, two days.

The case of Hicks was more obstinate, and not so satisfactory as far as the examination of the patient was concerned. But little dependence could, as the case progressed, be placed on her statements, and the extraordinary obesity of her person often foiled accurate definition by percussion, especially over the mammary region.

1st. As in the case of Pithers, the rheumatism soon gave way to the treatment employed.

But 2d. The heart affection was more obstinate. The effusion was comparatively small, and appeared greatest on her admission, from which time it gradually disappeared; the friction sound first becoming more loud, then less so; then becoming single on 13th May, and finally giving way to endocarditis in the mitral valve. This latter affection continued, being in no way reduced by the treatment. Connected with its development nervous symptoms

supervened, which masked the general symptoms so completely once or twice as to lead to the adoption of active treatment subsequently, which, perhaps, was not actually necessary. In this case there could be no doubt as to the reality of the presence of endocarditis. It could not be an anæmic murmur. This is restricted to the valves at the base of the heart, and its persistence proved that it could not be a single friction sound. Yet it is interesting to remark the coincidence of the cardiac valvular disease and the nervous symptoms.

The chief interest of Hicks' case was in the thoracic symptoms, independently of the cardiac complication. There was probably some pleuro-pneumonia present. On the 2d May the supra-spinous fossa of the right side was found duller than the left, and the respiration bronchial, with slight crepitation heard at the end of a deep inspiration. Opposite the angle of the right scapula there was a friction sound heard, both with expiration and inspiration, of an irregular leathery character. The next day the friction sound was more limited, and sonorous ronchi and large crepitation heard all around. This friction sound entirely disappeared on the 6th, large crepitation occupying its position. Crepitation was also generally heard over the left lung, at the inferior portion or which it was, on percussion, duller than the right corresponding portion, and the expiration much too loud. These symptoms continued much the same till the 10th, when the bronchial respiration was heard over a more extended surface in the upper part of the right lung. On the 17th bronchophony was heard over the upper part of the right, and lower part of the left lung; but over the lower angle of the right scapula, where the friction sound had been before heard, it was thought the sound was again present. This friction sound was, however, not heard after; sonorous ronchi and large crepitation occupying its place. On the 20th the dulness was diminishing. On the 6th of June it was still giving way, till on the 13th the difference of dulness on both sides was very slight, the expiration only over the supra-spinous fossa remaining too loud. The friction sound could only be due to pleuritis. It is an example of that kind or intercurrent dry pleurisy so frequently observed in the course of rheumatism, and perhaps not unfrequently mistaken for pleurodynia.

The consolidation in the upper part of the right lung, with the unhealthy expiration and the *anæmic* ronchus, might have been due either to pneumonia or tubercle with bronchitis. Yet as the case progressed the gradual increase in the extent of the conso-

lidation and bronchial respiration in the parts affected indicated the presence of active disease, while the absence of rûnclî and wæsting made it improbable that acute phthisis was present. This diagnosis was confirmed by the diminution of the consolidation, and the gradual and almost complete restoration of healthy respiration in the parts affected. To the last, however, the expiration remained too loud in the right supra-spinous fossa. In the absence of any hereditary predisposition to tubercular deposits to account for this, it was probably only due to some remaining inflammatory consolidation from the pneumonia, which in course of time would altogether disappear.

The state of urine in the case of Hicks presented several peculiarities. Triple phosphate was frequently found. The appearance of tubes and casts of the infundibuli and tubuli uriniferi were frequently observed. These are usually noticed in cases of Bright's disease; yet there was here no reason to believe this complication existed. The urine, even when all febrile symptoms had subsided, continued of a high specific gravity. On two occasions a trace of albumen was detected, on May 5 and May 10; but it was found on no other occasion; nor did there appear generally to be any deficiency in the salts excreted. The quantity actually excreted in the twenty-four hours could not be ascertained, for the reasons before noted.

On the 23d small organic globules were detected in the urine. Out of upwards of 2000 specimens of urine examined, we noted the presence of these globules in three cases only, including the present, as already remarked in the case of Champion (MED. GAZ. Feb. 7, 1850).

Lastly, on the day of her discharge a peculiar crystal was observed, which appeared to be four-sided (two sides, however, only being visible at one time), and tapering at both ends. The peculiar nature of these crystals we know not. In the few cases in which we met it it has been usually associated with nervous symptoms.

Duration of the disease.—The friction sound was heard from the 28th April to 9th May, twelve days. Rheumatism from about 24th April to 2d May, eight days. Endocarditis (mitral) succeeding immediately the attack of the pericarditis.

The case of Ely Lock had also its points of interest. In this case endocarditis, with marked cardiac symptoms, had occurred early, and disappeared one day after the supervention of the pericarditis. The pericarditis was succeeded by a considerable amount of effusion, and owing to his comparatively emaciated body the undulatory motion of the fluid, with the systolic move-

ments, was perceptible, as already noticed in the case of D. Whitehead. It was succeeded by a systolic murmur and engorgement. This murmur might be anemic or endocarditic. It could not be a single friction sound, as the sound was heard at the top of the sternum and in the neck; and if endocarditic, it is interesting to note its occurrence at a time when he was fully under the influence of mercury.

The enlargement which was noted on the 4th of June was clearly not from pericarditis effusion. That had reached its greatest extent on the 29th, 30th, reaching then three and a quarter inches transversely, and as high as the upper part of third rib; and on the 31st it reached only two inches transversely, and as high as fourth rib only. The friction, first loud, was scarcely heard on the 29th there; not heard on the 30th; and on the 31st very slightly so; but after this day it was not again heard, though subsequently cardiac enlargement supervened. This bore the characters of engorgement. Pericarditic engorgement is distinguished from pericarditis effusion by the following signs:—It occurs usually on any unusual exertion, or after the supervention of acute cardiac disease and its disappearance. 2d. The enlargement is almost exclusively transverse. It does not extend upwards, though occasionally it extends downwards. 3d. It comes on rapidly, and as rapidly subsides. 4th. It is free from pain. The symptoms in Lock were precisely these.

In this case, also, there appeared to have been some slight congestion of the upper part of the left lung, as indicated by the greater dulness on percussion and large crepitation, which, however, had subsided much at the date of his discharge.

The state of urine bore some resemblance to that of Whitehead, though affected in a minor degree. It was albuminous on his admission, and continued so for a few days, and tonics were required; the black tongue and aphthæ, as indicative of weakness, having appeared. As his cure progressed, so did the quantity of solid matter excreted increase; but as the specific gravity was usually above the average, there was no reason to believe that disease of the kidneys existed.

Duration of the disease.—The pericarditis persisted from 25th May to the 1st June, seven days. The rheumatism altogether, from the 16th May to the 14th June, twenty-eight days; the endocarditis, or mitral murmur, preceding immediately the pericarditis, and a second attack of endocarditis succeeding the disappearance of the pericarditis.

In the progress of these three cases there were several points of resemblance.

1. There was no connection between the

severity of the rheumatism and pericarditis. In Pithers the rheumatism was subacute, and it lasted twenty-seven days; the pericarditis thirteen. In Lock twenty-eight days; the pericarditis seven days. In Hicks it was subacute, and lasted only eight days; the pericarditis persisted for twelve days.

2. In none of the cases did the pericarditis appear to originate from metastasis. The rheumatism persisted in all after its appearance, nor did the heart symptoms diminish on the supervention of any more acute symptoms about the joints.

3. The rheumatism in all the three cases was the fibrous variety.

4. In all the pericarditis was succeeded by endocarditis.

5. The employment of mercury did not seem to have any influence whatever in preventing the occurrence of the endocarditis.

6. In all there seems to have been some slight affection of the lung, which in the case of Hicks, however, amounted to pneumonia.

7. In the three the pericarditis occurred before the eleventh day after the first seizure. In Hicks probably on the fourth day. In Pithers on the sixth. In Lock on the tenth day. This is the common case.

8. In all the pericarditic seizure was preceded by slight delirium, most marked in the case of Hicks. As far as our experience goes, this symptom is, we believe, never absent. In some cases it is known to be very much developed.

9. The probability is, that in both the cases of Pithers and Lock adhesion of the pericardium occurred. The case of Hicks is more doubtful, as the frequency of the pulse (after pericarditis usually attributed to adhesion) might have been due to the hysteria present. Dr. Watson believes these adhesions always occur. Dr. Taylor, however, has found old adhesions of the pericardium in 1 only out of every 16 bodies opened, and white spots or patches in 1 out of every 4 in the pericardium, without adhesions.

10. In all three cases some degree of hypertrophy of the heart seems to have resulted,—least in Pithers' case.

11. The twitchings and jumpings described by some writers as occurring in pericarditis, were observed only in the case of Lock. This symptom is regarded as unfavourable by Dr. Burrows (*MEDICAL GAZETTE*, vol. xi, 1842-3), as only 4 out of 14 cases in which this symptom was observed recovered.

I. *Causes*.—Some of these have been already alluded to.

1st. Predisposing of the rheumatism.

a. The hereditary tendency; b. The age between 15 and 30; c. In all some debilitating influence had persisted for some time prior to the seizure, and the patients had inhabited damp localities; d. In the case of Hicks, we had in addition a previous attack of rheumatism.

2d. Predisposing of the pericarditis; a. Pericarditis is most common in first attacks of rheumatism. In Lock and Pithers this influence might have co-operated; b. Pericarditis is most common between the ages of 15 and 25. Both Lock's and Hicks' were within these ages.

II. *Exciting causes*.—The wet feet in the case of Hicks could scarcely be regarded as the exciting cause of the rheumatism. When cold or damp are the causes, the effect is felt within a few hours; but it often happens that a cause to which a patient may have been long exposed with impunity while in a state of health, will have its deleterious influence when the patient is weakened by any superadded debilitating cause. Of these, *fatigue* is a frequent cause. In some of Dr. Taylor's published cases, it appeared to be the only traceable exciting cause. It existed in two of the present cases: Hicks and Lock. It was absent in the case of Pithers, but here mental depression coexisted, which is also a powerful debilitating cause, and probably contributed, as fatigue did in the two others, to the deleterious influence of cold.

Prognosis.—In none of the above cases could it be said to be bad, if we except the case of Lock; and here, according to Dr. Burrows, the twitchings were an unfavourable sign. The complication of pericarditis was, up to a certain point, in itself unfavourable. It was found by Dr. Taylor present in 16 out of 355 fatal cases of rheumatism. Generally, however, pericarditis, if taken in time, is a curable disease; yielding, according to Dr. Thomson, to free depletory measures. The future inconveniences which may result to these patients are, however, more serious: hypertrophy of the heart, with all its accompanying evils, will go on progressing, at least in the cases of Lock and Hicks, where the probability is that valvular disease exists.

LOCAL TREATMENT OF CANCER OF THE BREAST.

DR. GRÜTZNER relates the particulars of a case of cancer of the breast, in which inflammation having been excited by chloride of zinc, suppuration was promoted by balsam of Peru, creosote, &c., together with the internal exhibition of iodide of potassium. The tumor was detached, and the surface healed perfectly.—*Casper's Wochenschrift*.

Correspondence.

FEIGNED DISEASES—SUCCESSFUL IMPOSTURE—ITS ULTIMATE DETECTION.

SIR,—I forward the following extract from a local paper, thinking you may consider it sufficiently interesting to be worthy a corner in your journal.

We have been forcibly struck with the very close resemblance which the case bears to what Mr. Mayo (Outlines of Human Pathology) has described as "white gangrene of the skin;" and at page 341 of Johnson's Medico-Chirurgical Review for 1886 (where this portion of Mr. Mayo's work is copied), the reviewer adds the history of a case which also seems identical in character with it. So appositely, indeed, does our case answer to the descriptions above alluded to, both as regards the first appearance of a patch (*i. e.* on our attention first being called to it), and in its subsequent progress, as well as, in the youth and the otherwise perfect health of the patient,—that, although such high authorities seem not to have entertained the slightest notion but that all was the effect of legitimate disease, we cannot avoid suspecting that they were as thoroughly deceived as have been the early attendants of our patient.

What first aroused our suspicions in this case was the consideration of the circumstances summed up in the two first "arguments." The testing required caution and time, the three fresh patches showing themselves at intervals of several days; but so exactly did it correspond on each of the three occasions, that after the third a search for the muriatic acid was considered warrantable, and was securely effected without her interference during the patient's absence from bed for the pretended purpose of having a warm bath.

I should, perhaps, add that the accuracy of the following report may be relied on: it was not the chance production of a "correspondent," but was sent to the newspaper by myself, at the request of our Board.—I am, sir,

Your most obedient servant,
GEORGE FREDERICK HODGSON,
Surgeon.

Sussex County Hospital, Brighton,
May 7th, 1886.

"At the weekly board of the Sussex County Hospital yesterday, a remarkable and almost incredible case of imposture was exposed.

"A woman, named Betsy Ginn, aged 23, (received three weeks since as an in-patient, on the recommendation of a subscriber and

a surgeon's certificate) was charged by her surgeon with wilfully producing the disease for the cure of which she had applied to the hospital.

"The statement made against her was, that very numerous diseased patches of the skin, over nearly the whole of her body, limbs, and face, were the result of her own application to the parts of hydrochloric acid (spirit of salt.) Several patches were nearly as large as the palm of the hand; and they were in different stages, the recent ones being yet in a gangrenous condition, others (from which the sloughs had separated) were deep and troublesome ulcers, and many (the majority) had healed, but with disfiguring scars, and in some places to the injury and contraction of the adjacent sinews.

"The following arguments were advanced by her attendant:—That the parts of her body (as her back, &c.) not readily accessible to her own hands remain perfectly sound and free from scars; that the affection was totally different from any disease which he had ever witnessed; that the three fresh patches which had shown themselves during her stay in the County Hospital had been scrutinized, and that some distilled water with which they had been carefully washed gave with chemical tests abundant evidence of the presence of hydrochloric acid; that a little hydrochloric acid which he had up from the surgery, and applied to her skin, had produced a whitish and gangrenous spot, a miniature facsimile of the others; and, lastly, that, on searching her clothes, a phial had been found containing the remains of some hydrochloric acid.

"The woman, after many denials and prevarications, at length admitted her guilt; and further, that she had been practising the deception for a period of nearly three years, four months of which she had spent in the Colchester Hospital, and nine weeks in University College, London, without the imposture being discovered. While begging for mercy, she stated that she had been induced so to act, in the hope of obtaining a better home than a work-house."

LICENTIATES OF THE ROYAL COLLEGE OF PHYSICIANS.

SIR,—In your impression of this day I have just perused the second or third defence which you have made as to the right of the Licentiates of the College of Physicians to the title of M.D. Allow me to say that, much as I respect your editorial talents and the argumentative tone of your articles generally, I differ from you *in toto* on the present question.

By an University I understand a corporate body of individuals empowered by the Government of the country, or its nominal head, to act as delegates in the place of such head for the conferring of certain titles, this being a power which the University exercises in addition to its province as a director of education. As all such bodies are, I believe, at present constituted, these titles always bear reference to certain literary or scientific attainments; but nevertheless they lose none of their legal force if conferred upon ignorant persons: the title becomes a part of his name and designation as much as that of "Knight," "Baronet," or "Earl." The original significance of these latter titles, you must own, was very different from the meaning which we now attach to them.

Now, if I understand your reasoning, you would make M.D. to mean now nothing more than what it is literally translatable into—viz. "Teacher of Medicine;" *ergo* (reason you) the converse of this is true—i. e. every one legally authorized to teach medicine is M.D. (1.) But here I must totally dissent from your conclusions. As well might any man who has all the qualifications in the shape of horses, servants, and property, which a knight used to be required to have, claim to be called "Sir." Or, again, any Licentiate of the Apothecaries' Society, who has received the approbation of the Court as a teacher of some branch of medical science, is a "Teacher of Medicine;" and therefore, to be consistent, we should give him the title of M.D. (2.)

Now the College of Physicians confers no more in the right of practice and teaching than the Apothecaries' Company: its Licentiates simply take a higher stand as practitioners and as teachers (8). If the College had ever received, or had it ever been intended that it should possess, the power of conferring the title of M.D. (i. e. title, as apart from all function), can we entertain a reasonable doubt that there would be a distinct declaration in the Charter of the College of this power having been given? (4.)

I do not wish to deny that the Licentiates of the College of Physicians, as a body, are, judging by the nature of the examinations which they have passed, as much better fitted for all the duties of either a physician or a teacher than are the mere M.D.s of some Universities,—as are the M.D.s of some other Universities than the mere Licentiates of the College.

And I think the very fact of most medical practitioners, on becoming Licentiates (if they are not so fortunate as already to possess a degree), obtaining by some means the title (although too often, alas! from a beggarly source), proves that the view I

take is one generally held by the profession; and, if we should go out of our own ranks into another faculty, I think the opinion would be corroborated by a D.O.L., not to mention untitled "Teachers of Civil Law."

Again, the College itself, knowing that it possessed no power of this kind, used to require the previous possession of a degree from all candidates for its license, until in the advance of time it was shown that it was quite possible for a man to be a legal M.D., and probably a very fair physician, but not such as to suit the requirements of the present age, his standard of qualification having only reached to the same point as that of his ancient predecessors. Then the College endeavoured to make its requirements of previous education as real as possible, that it might send out to the world, at any rate, physicians, though they might not be M.D.s.

Apologising for trespassing so far on your space,—I remain, sir,

Yours obediently,

CRESSON.

Walworth, May 10, 1850.

* * 1. We have nowhere said that every one legally authorized to teach medicine is M.D. To justify the taking of this title the person must either possess a degree or the diploma of the Royal College of Physicians. 2. The Licentiate of the Apothecaries' Society is licensed to exercise the art and mystery of an apothecary only: there is no power conferred on him by diploma *tam docendi quam exercendi scientiam et artem medicam*, &c. 3. The qualifications, as well as rights, privileges, and titles, are entirely different, as a comparison of the licenses will show. 4. Charters convey *implied* as well as express powers. The original charter does not give the College the power of conferring a license or diploma in express terms, yet no one can doubt that some such instrument is necessary to identify those who have passed the legal examination; and, for a like reason, the College has the power of conferring a title on its members. This title is declared in the diploma to be that elsewhere conceded "*medicis*"—i. e. to Doctors of Medicine.

THE COLLEGE OF SURGEONS AND ITS NEW RESOLUTIONS.

SIR,—In the leading article of your last number, May 3d, respecting the bye-laws of the College of Surgeons relating to admission to the Fellowship, you remark thus:—"We feel that they who became members immediately after the date of the Charter may have reason to complain of their exclusion, as, having been since en-

gaged in practice, they cannot resume the studies necessary to a qualification for the Fellowship.*

Now, sir, there can be no doubt of the justness of this complaint, not only on the part of those who became members immediately after the date of the Charter, but also on the part of all those who already had only commenced their studies. These who had only commenced their studies, although not members of the College, were members of the profession over which the College presides: they entered that profession with the existence of certain laws before them, and in the alteration of those laws they cannot but consider the College ought to have recognised their claims to consideration. They had commenced their career in accordance with College rules: they were acting on the good faith of the College, and regarded her as their alma mater; they were, indeed, *prospective members*, and, as such, their claims to consideration were as just as those of actual members. But the College has thought otherwise: she has either forgotten them, or passed them by as unworthy of notice.

Again, sir, you have remarked—"Never was a law yet passed, however, which did not inflict injustice somewhere; and all that the law-maker is bound in equity to perform is, that the new rule should inflict the least amount of injustice upon the smallest number of persons." In proof, sir, of the incorrectness of this statement,* I beg to refer you to a bye-law of the University of London, by which all those candidates are admitted to examination for degrees in medicine, without having passed the matriculation examination, *who commenced their studies prior to Jan. 1839*. This rule remains in force at the present time; and where is the injustice of it?—it admits within its provisions *all* who had *only commenced* before Jan. 1839, and can inflict injustice on none. Against such a rule there can be no expression of discontent: it is an effectual bar against individual dissatisfaction, as it acknowledges all who were within the pale of the profession at the time it was made.

The Council of the College can do justice to the various members of the profession only by passing such a law as that above,—one which will include all who had commenced their studies prior to the Charter of 1843. Let those who were members before 1843 be admitted after twenty years'

standing, as proposed; and let those who had only commenced their studies before 1843 be admitted by the same rules as those examined before 1850, while those who shall have commenced after 1843 are subject to such laws as may be passed.

It may be said the intention of the Fellowship would be defeated by such rules; but I would remark, as regards the Fellowship conferring any honourable and select distinction, that object is already defeated by the many who must obtain it after their twenty years' standing. The admission of those who in 1843 were only *prospective members* would exert no great influence in further diminishing the value of the Fellowship. The design of the promoters of the Charter is lost to the present generation of surgeons. The Fellowship does not attach to its holders that high and exclusive rank originally intended; but, as it has been extended so far, why not increase it so as to include the prospective members in the same regulations as those admitted by examination before 1850? Should the Council think proper to make such provisions, they will only be acting with justice, and leave no ground of complaint for any one; but should they not think fit to do this, there must always remain among its members a feeling destructive to the well-being of the College.

I am, sir,

Your most obedient servant,

ZETA.

May 8, 1850,

. If this proposition of our correspondent were conceded, we think there would still be another class of complainants, and so on *ad infinitum*. The proper course for those who feel themselves aggrieved is to petition the College to make the same concession as that made by the University of London.

ALLEGED CONTAMINATION OF THE AIR OF LONDON BY GRAVEYARD EFFLUVIA.—THE ARITHMETICAL CALCULATIONS OF THE SANITARY COMMISSIONERS.

SIR,—As there are many persons who decry the use of reason, well knowing that reason is against them, so it has of late become the fashion to throw suspicion on arithmetical statements, on the plea that anything may be proved by figures. What is the science of arithmetic?—Merely a method of obtaining and stating results respecting number, time, and quantity, by means of a few arbitrary characters, which it would be difficult, and in many cases impossible, to obtain by means of words.

* We cannot perceive the incorrectness of this statement, although a difference of opinion may fairly exist concerning the application of the principle which it involves. Does our correspondent consider that a law-giver would act more equitably by inflicting the greatest amount of injustice on the largest number of persons?—*Ed. Gaz.*

But as men can and do deceive each other in words, so likewise they may deceive in arithmetical statements. This may be done not merely by the assertion of a direct falsehood, but still more effectually by setting forth an acknowledged truth, and then applying it without the smallest notice of those modifying circumstances on which the practical use of it wholly depends.

A somewhat flagrant instance of this occurs in a recent Report of the Sanitary Commissioners, who compute that no less than *two million and a half cubic feet* of poisonous gas, emanating from the decay of dead bodies, are annually thrown into the atmosphere of London. The Commissioners add, "that from the law of the diffusion of gases, they must be rapidly spread thorough the whole of the atmosphere that surrounds the metropolis; and, though they thereby become diluted, yet that they do materially contribute to the contamination of the air breathed by two millions of people cannot, we think, admit of any reasonable doubt."

The amount of this poisonous gas is allowed or admitted; but, before the Commissioners took on themselves to affirm that it "materially contributes to the contamination of the air of London," it was incumbent on them to ascertain the proportion in which the gas is so diluted. If they omitted to make the computation, they neglected their duty; if they did make it, they may claim at least the merit of hardihood of assertion, whatever the amount of that merit may be.

I shall therefore endeavour to quiet the fears of my fellow-townsmen, who imagine that they taste the essence of dead bodies in every breath they draw, by showing them how small a part of the two million and a half cubic feet of poisonous gas comes to their share.

Two million and a half of poisonous gas emitted in a year gives 6849 cubic feet in twenty-four hours.

A line drawn eastward from the farther end of Oxford Street to the London Hospital in Whitechapel, will be about five miles long; another line, at right angles to this, from the parallel of the New River head to the Queen's Bench prison, will be two miles. The ten square miles included within this figure are nearly filled with houses, and have several very populous districts on the outside of it: in taking this as the area of the metropolis, I am therefore very far within the real limits. The number of square feet in ten square miles is more than 278 millions. If, therefore, the whole of this area were covered with air a foot deep, containing the above-mentioned 6849 cubic feet of poisonous air,

the proportion of this latter to the common air would be as 1 to 40689. But if we allow the poisonous gas to extend upwards by the law of diffusion to the height of *six feet*, in order to immerse in it completely all who walk in the streets, then the air they breathe would contain 1 of churchyard gas in 244184 of air! This, however, is on the supposition that the air of London is changed only once in twenty-four hours; whereas it is continually drifting away in obedience to the wind that happens at the time to be blowing, as is seen from the direction taken by the London smoke. Now if we assume the amount of the drift to be only at the rate of one mile in an hour, the proportion of churchyard gas in the air breathed in the streets of London cannot exceed *one in five million eight hundred thousand parts of air*.

I am, sir,
Yours, &c.

A.

May, 1850.

EFFECT OF RAILWAY TRAVELLING ON ANIMALS.

I WAS requested to see three horses labouring under inflammation of the lungs, and which had arrived by rail from London to Berwick. A day or two after their arrival, illness manifested itself, and the horse I was more especially desired to examine will not live many hours. His ears and legs are cold, deathly cold—has laborious breathing—is nearly pulseless, at least the pulse is very imperfectly felt—has a bloody exudation from both nostrils—the conjunctival vessels are of a very dark red colour, nearly black from congestion; the Schneiderian membrane is very dark-coloured; he is lying and looking at his sides with an expression of great suffering; in short, he has all the symptoms denoting a speedy dissolution. Has railway travelling anything to do in the production of pulmonary or other diseases?—are horses that travel by rail more liable to head or chest affections, or any other disease? I have no experience in this, as we have no railways as yet in our quarter; but I have been told that butchers prefer purchasing cattle that have been driven by the road to those conveyed by rail; there being present in the latter an infiltration of bloody serosity into the muscular and cellular tissues, or something, as they say, resembling that, the muscles being flabby, and not possessing that firm feel and pure colour like those animals driven by the road. Is this a fact?—*Mr. Boag, in Veterinary Record.*

Medical Intelligence.**STATISTICS OF THE MEDICAL PROFESSION
IN ENGLAND AND WALES.**

In the present volume (page 436) we gave, from Dr. Crisp's *Medical Examiner*, a summary of the statistics of the medical profession in the metropolis. We subjoin his analysis of the *Provincial Medical Directory* for the present year.* He informs his readers that this contains the names of 8380 practitioners, with every variety of qualification, and with no license or qualification. We have rearranged the list in a more intelligible form than it appears in this publication. There are of—

M.R.C.S. and L.S.A. (The general practitioners of England and Wales)	3698
In practice before 1815, or qualification not stated	1408
Physicians and M.D.s variously qualified	1860
M.R.C.S. alone	1127
L.S.A. alone	787

8380

The qualifications of these practitioners are thus arranged in numerical order:—

London College Surgeons and Hall	3698
London College Surgeons alone	1127
Apothecaries' Society alone	787
Graduates of University of Edinburgh (211 no other qualification)	535
University of St. Andrews	118
Edinburgh College Surgeons alone	113
Foreign degrees	103
University of Glasgow	99
University of Aberdeen	64
University of Cambridge (44 M.D.)	62
Apoth. Hall and Edinb. Coll. Surg.	60
University of London (25 M.D.)	59
Glasgow Surgeons	32
University of Dublin (14 M.D.)	24
London and Edinburgh College Surg.	17
University of Oxford (12 M.D.)	14
Dublin College Surgeons	14
London College of Physicians alone	12
Apoth. Hall and Glasgow Surgeons	10
Apoth. Hall and London and Edinburgh College of Surgeons	9
Apoth. Hall and London and Glasgow College	4
Apoth. Hall, London College, and Dublin Hall	4
Lambeth degrees	4
London and Glasgow Surgeons	3
In practice before 1815, or qualification not stated	1408

8380

April 1830, p. 28.

The possessors of diplomas are thus enumerated:—

Scotch diplomas	1064
Foreign	103
Irish diplomas	42

It would thus appear that there are practising in England and Wales:—

M.R.C.S. and L.S.A.—

Metropolis	935
Provinces	3698—4633

M.R.C.S. alone—

Metropolis	536
Provinces	1127—1663

L.S.A. alone—

Metropolis	251
Provinces	787—1038

University of Oxford—

Metropolis	26
Provinces	14—40

University of Cambridge—

Metropolis	46
Provinces	62—108

University of London—

Metropolis	63
Provinces	59—122

English qualifications 7604

University of Edinburgh—

Metropolis	171
Provinces	535—706

University of St. Andrews—

Metropolis	61
Provinces	118—179

University of Glasgow—

Metropolis	39
Provinces	99—138

University of Aberdeen—

Metropolis	22
Provinces	64—86

University of Dublin—

Metropolis	18
Provinces	24—42

Foreign Universities—

Metropolis	92
Provinces	103—195

Scotch, Irish, and foreign qualifications } 1846

It is impossible to arrange the mixed qualifications of the Apothecaries' license with other Halls and Colleges, but these are not very numerous, and the result of this analysis is that there are of practitioners of all kinds:—

In the metropolis	2567
In the provinces	8380

Total 10947

Of these, 7604 are possessed of English qualifications, and only 4633 have the double license of the College and Hall. There are 1663 Members of the College

who have not the license of the Hall, while there are 1038 licentiates of the Hall who have not the diploma of the College. The general practitioners are, therefore, really under 5000, and making due allowance for accidental omissions, it would be difficult to carry this number to 6000. In fact, the Members of the College and Licentiates of the Hall taken together are considerably under 7500, while they have been magnified into 13,000, and even 20,000.

There are 1346 gentlemen practising with Scotch, Irish, and Foreign diplomas, and of these more than one-half are graduates of the University of Edinburgh.

The members of the Royal College of Physicians are not distinguished in the above list. By reference to the catalogue issued in 1849, we find that there were—

Fellows	171
Licentiates	248
Extra Licentiates	245

Total 664

Hence it will be seen that the College licence is possessed by only a small number of those who are actually engaged in practice as physicians.

**MEMORIAL OF THE APOTHECARIES' SOCIETY
TO SIR GEORGE GREY, BART.**

*To the Right Honourable Sir George Grey,
Bart., Her Majesty's Principal Secretary
of State for the Home Department.*

THE memorial of the Master, Wardens, and Society of the Art and Mystery of Apothecaries of the City of London,

Sheweth,

That the Society of Apothecaries were entrusted by the Legislature in the year 1815 with the duty of regulating the course of study, and deciding upon the qualifications, of all who should thereafter propose to engage in that branch of medical practice.

That the Society do not hesitate to affirm that they and their predecessors have discharged that duty, for a period of five and thirty years, zealously and faithfully, and, as they confidently believe, with advantage to the public.

That they have laboured incessantly to render the medical attendant of the great mass of the people of this country thoroughly competent to the discharge of the important duties which devolve upon him; and they have striven, to the extent of their powers, to elevate the professional and social status of the large body of practitioners who have been educated under their auspices.

That the Society have been long sensible of the necessity which exists for a revision

of the laws affecting the medical profession generally; and they have omitted no fitting opportunity of representing to the Government the changes which are required in the act of Parliament under which the functions of this Society are exercised.

That they have aided, to the best of their ability, the efforts which have been made of late years to render the medical institutions of this country better adapted for the discharge of their respective functions.

That, irrespectively of all personal considerations, and with a single desire to promote any arrangement which gave reasonable promise of an improvement in the medical polity of the country; and, in the hope that an Incorporation of the General Practitioners in Medicine, Surgery, and Midwifery, possessing an unrestricted right of examination in every branch of professional knowledge, would result in such an improvement; and, in the belief that such an incorporation was, in fact, desired by a large proportion of the general practitioners themselves, the Society consented to relinquish the performance of the duties in which they had been so long engaged.

That the conferences which took place between the Government and the various medical authorities in the years 1845 and 1846, in which the Society lent their willing and active co-operation, having failed of effect, the Society were themselves the first to propose the conference of the medical corporations, to which delegates from the National Association of General Practitioners were afterwards admitted, upon the suggestion of the Secretary of State; that at the frequent meetings of the conference thus constituted, the delegates from the Society of Apothecaries, in conjunction with the other members of the conference, zealously laboured to effect such an arrangement as might prove generally acceptable to the medical profession, and might secure the sanction of the Government and the Legislature; and the Society have seen the unsuccessful termination of the labours of that conference with unfeigned regret.

That although the Society, under the circumstances which have been stated, consented to relinquish the duties which were entrusted to them by the act of 1815, they are anxious not to be understood as regarding the performance of those duties as onerous or distasteful: on the contrary, they have ever regarded the trust confided to them by the Legislature as of the most honourable character: they look back upon the public good which they have been enabled to effect with the highest feelings of pride and satisfaction; and they will never voluntarily relinquish the performance of their duties but under the strongest conviction that the public will be benefited by

the change in the law which would transfer those duties to other hands.

That the Society would not have intruded the expression of their feelings upon the Secretary of State at the present moment, if an impression had not gone forth that the Society were willing to be relieved from the labours imposed upon them by the act of 1815, and if they had not thought that their silence might give some sanction to such an impression.

That the Society have during the agitation, and, unhappily, the dissensions to which the discussion of the question of medical reform has given rise, steadily persevered in carrying out the objects of the Legislature, by improving the curriculum of study, and raising the standard of qualification of those who seek their certificate, and they will continue to do so as long as they retain the confidence of the Legislature; and the Society refer with the utmost satisfaction to the evidence given before successive committees of the House of Commons on medical affairs, and to the concurrent testimony of members of all branches of the profession, as to the result which has attended the Society's administration of the Apothecaries' Act.

That the Society are, from their experience of the actual working of the law, fully sensible of its defects; that they are, as they ever have been, anxious to remedy those defects; and are prepared to lay before the Secretary of State such suggestions for the amendment of the act as would, in their opinion, go far to remove the objections which exist to its provisions, and would, at least, remove many of the impediments in the way of a satisfactory settlement of the complicated question of medical reform, not only as regards England and Wales, but the Kingdom at large.

On behalf of the Society,

J. B. EYLES, *Master*.

MEMORIAL OF THE PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION REGARDING MEDICAL LEGISLATION.

To the Right Hon. Sir George Grey, Bart., Her Majesty's Principal Secretary of State for the Home Department.

SIR,—The deputation from medical and surgical practitioners residing in various parts of the kingdom, assembled in conference at Morley's Hotel, Trafalgar Square, London, on Thursday, the 2d of May, 1850, unanimously resolved to memorialize you in reference to the following considerations.

That in any legislative measure which may be proposed for the future regulation of the medical profession two principles should be steadily kept in view—1st. That

the public good, irrespective of all mere corporate privileges, should be rendered the paramount object; and 2nd. That class distinctions in the profession should have regard only to those relations which have arisen spontaneously in the actual practice of medicine amongst its different members on the one hand, and between the profession and the public on the other.

The deputation would strongly urge the importance of these principles, as the only just or permanent basis upon which legislative reform of the medical profession can rest.

The provincial physicians and surgeons, whom the deputation represent, have regretted that the subject of medical legislation has so often been regarded in reference rather to supposed conflicting interests in the profession itself, than to the first of the two principles enunciated above.

Medical reform, they respectfully submit, involves considerations, when estimated aright, of much greater moment than misunderstanding and discord amongst medical corporations and their respective members, the question being one which possesses the deepest interest for all persons, seeing that upon its proper settlement must mainly depend the character and the skill of those to whom, in the most confiding faith, the public entrust both health and life.

It is clearly of no consequence to the public whether the medical attendant enjoys any particular title or not, but it is of the last importance that he should be competent to practise his profession with advantage to the community; and more especially is this the case in the provinces, where the ready aid of consultations is not always attainable. Under these circumstances, the deputation would urge that resistance should be offered to every attempt to create an inferior grade of medical men of but limited education, and of aptitude only for the "ordinary exigencies" of practice. The ills to which flesh is heir afflict persons very much alike in all districts, and in all ranks of life, on which account the same skill should be available everywhere in antagonism. Were the fact otherwise, if the great body of the people were subject to ailments less difficult of management than the wealthy and the aristocratic, some reason would exist in the proposal to educate an inferior grade of practitioners to attend them. The contrary is, however, rather the fact; the unfavourable conditions in which the poor and the struggling classes are placed aggravate very seriously the diseases which befall them, rendering the treatment more difficult and complicated, and its results more precarious.

With respect to class distinctions in the

medical profession, the deputation would observe that the wants of the community, and the relations that have spontaneously arisen in the profession, have established and rendered intelligible the division of physician and surgeon, the former devoting himself exclusively to the management of internal maladies, and the latter, as a general rule, to the healing art, without any restriction at all. This distinction, recognised by the public, is the only one which exists upon any considerable scale. The term general practitioner is neither heard nor employed out of London, except in connection with the subject of medical reform: it describes, moreover, no separate class,—doctors of medicine, fellows and members of surgical colleges, as well as the mere licentiate of Apothecaries' Hall, *practising generally*, or otherwise, according to circumstances of locality and social position. Altogether, the term is an inappropriate and an unfortunate one. Were it simply ridiculous it might be passed over. It has operated, however, most prejudicially upon *provincial* surgeons, as it has fostered an assumption upon the part of certain *metropolitan* surgeons, that a great superiority of attainments and skill is with them, when contrasted with their provincial brethren, because the former for the most part include in their practice both midwifery and pharmacy, whilst the latter exclude them. The deputation would repudiate most entirely so unprofessional a designation as general practitioner, as also the idea which it is sought to attach to the term. They would remark, at the same time, that no greater mistake can exist than to suppose that the practice of *pure* surgery, in the ranks of the profession, has any existence. A sound judgment and discrimination can recognise no surgery that does not involve *medical* considerations: in point of fact, *pure surgery*, which is merely manual and mechanical appliance in disease, is notoriously a fiction, as a department of practice, excepting amongst certain classes of empirics.

Individuals, from taste, or natural talent, or special opportunities, may and do obtain an unusual excellence in some branches of the healing art, rather than in others; and in some circumstances such individuals are enabled to dedicate themselves almost exclusively to particular divisions of practice. This, however, is a circumstance determined in nowise by the educational career or collegiate rank.

The great population of London and its immediate environs develops, to an unusual extent, the division of labour in every pursuit. Hence some surgeons are enabled to realise handsome incomes, though pharmacy and midwifery be excluded from their

practice; yet, even in the metropolis, departmental practice is but the lot of a small minority of surgeons.

Elsewhere, indeed, the surgeon, whatever be his collegiate title, must almost invariably practise generally, from the necessity of the case; and no reason would appear to exist for awarding a higher professional rank to the departmental surgeon, or for assuming upon his part superior attainment. It is well known that some of the most distinguished surgeons have existed among those who have practised midwifery. White, of Manchester, and Hey, of Leeds, may serve as examples; it might be invidious to refer to living instances. It is a truth, moreover, that members of the Council of the Royal College of Surgeons of England do themselves, in some sense, practise generally—they prescribe systematically for all the internal ailments of their private patients, and the diseases of even women and children, although they repudiate practical midwifery.

The deputation would press upon your attention the impolicy of any attempted classification of the profession according to exceptional instances that have resulted from accidental circumstances. They submit that in any medical bill that may be introduced into Parliament, provision only be made for the future education and registration of physicians and surgeons, indications of university or collegiate rank being appended to the separate names on the register.

Mere licentiates of the Apothecaries' Company, who legally are neither physicians nor surgeons, the deputation feel satisfied constitute a very insignificant minority of practitioners, certainly not more than one in twenty.*

They would urge upon you the desirableness of not providing for any continuance of this class, as neither the Government of the country, nor the directors of charitable institutions, recognise their competency. On the part of the Government, they are excluded from the army and navy, from prisons, and from poor-law unions; and on the part of the public, from hospitals, dispensaries, and other medical charities.

Still the deputation would represent to you, that, having respect for existing privileges, they would permit the licentiates in question to register as surgeons, their limited qualifications being sufficiently expressed by initials appended to their names.

In submitting, sir, the present memorial to your attention, it has been the principal object of the deputation to give prominence to certain considerations which they deem

* This is a mistake. Our tables (p. 867) prove that out of 10,947 practitioners, there are 1098 mere licentiates.—Ed. GAZ.

from some cause to have been in a great measure overlooked.

Signed on behalf of the deputation,
W. WATSON BEEVER,
Chairman.
Morley's Hotel, Trafalgar Square,
May 2, 1850.

**MEMORIAL OF THE SCOTCH COLLEGES AND
UNIVERSITIES ON MEDICAL REFORM.**

Unto the Right Honourable Sir George Grey, Bart., Principal Secretary of State for the Home Department of Her Majesty's Government, the Memorial of the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the Medical Faculty of the University of Edinburgh;

Humbly sheweth,—

1. That in the year 1815, the Society of Apothecaries in London obtained an Act of Parliament which rendered it penal for any person to practise as an Apothecary in England without their licence.

2. That the legal definition of an apothecary's province is the dispensing of drugs for the treatment of internal diseases.

3. That the middle and lower classes of people in England are chiefly supplied with medical aid through the administration of drugs.

4. That the poor-laws of England preclude any person from being appointed to the medical charge of a Union who does not possess the apothecaries' licence.

5. That it is thus impossible, by any extent of education or examination in Scotland, to obtain the right of general practice in England.

6. That Scotland possesses various medical schools and licensing boards, which, it is believed, discharge their respective duties with at least not less efficiency than any other bodies of a similar kind in Her Majesty's dominions.

7. That the medical education and licences of Scotland have long been regarded as affording the most ample qualification for admission into the Army and Navy, and other departments of the public service; and that many gentlemen possessing Scottish qualifications have attained the highest rank as physicians and surgeons in English practice.

8. That the existing restriction on general practice in England of gentlemen educated in Scotland is unjust, inconsistent with the Union between the two countries, and injurious to the interest of both, especially the former, which is thus deprived of fully qualified medical practitioners, and forced to accept the services of those from whom a more limited education is required.

9. That your memorialists, the Royal

College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, possessed certain exclusive privileges of practice which they have voluntarily relinquished, so that there is now no restriction on medical practice in Scotland.

10. That in the event of its proving desirable for the arrangement of a general measure to establish uniformity of privilege on equality of qualification, your said memorialists, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, together with the Royal College of Physicians of Edinburgh, are prepared to form a Conjoint Board of Examiners, and to regulate the education requisite for obtaining the licence of general practice in accordance with any system which may seem most expedient to a medical council, or other superintending authority over the medical profession.

11. That your memorialists, the Medical Faculty of the University of Edinburgh, being engaged in teaching the various branches of medicine and surgery in the largest medical school of Her Majesty's dominions, find their exertions impeded by the regulations of the Society of Apothecaries in London, which interfere with preparatory study, by requiring *the useless drudgery** of a five years' apprenticeship and enjoin the courses of medical study to be taken in an order different from that which, in the opinion of well-informed members of the profession, is most advantageous for sound instruction.

12. That all of your memorialists, therefore, earnestly and respectfully pray that the unjust and injurious restriction of the Apothecaries' Act may be removed.—And your memorialists will ever pray, &c.,

(Signed) WILLIAM SELLER,
President of the Royal College of Physicians of Edinburgh.

JAMES SYME,
President of the Royal College of Surgeons of Edinburgh.

JAMES WATSON,
President of the Faculty of Physicians and Surgeons of Glasgow.

JOHN HUTTON BALFOUR,
Dean of the Medical Faculty of the University of Edinburgh.
Edinburgh, 22nd April, 1850.

MEMORIAL FROM THE MACCLESFIELD MEDICO-ETHICAL ASSOCIATION ON THE SUPPRESSION OF ILLEGAL PRACTICE.

To the Right Honourable Sir George Grey, Baronet, Her Majesty's Principal Secretary of State for the Home Department.

SIR,—We, the undersigned, President and Honorary Secretary of the Maccles-

* This is a misstatement; the useless drudgery is not required.

field Medico-Ethical Association, formed for the purpose of determining the ethical relations, and supporting the interests of the medical profession, beg leave respectfully to submit the following memorial, with reference to the medical bill you contemplate introducing to the Legislature:—

That there is a large number of unauthorised practitioners, resident and migratory, who, by assumed and fictitious titles and qualifications, impose upon the credulity, and trifle with the health and lives, of a very considerable portion of Her Majesty's subjects.

That of this class of persons there are not a few who become accessory to criminal modes of effecting abortion among young and unmarried females.

That the increasing ratio of illegal practitioners far exceeds that of the duly qualified; and that every unsuccessful attempt, from time to time, on the part of the enlightened members of Her Majesty's Government, to legislate on the subject, tends seriously to extend and perpetuate the evil, inasmuch as it furnishes a presumption with the interested parties that no available remedy can be devised.

That the inefficiency of the Apothecaries' Act for these purposes has long been deplored by the members of the profession as a practical anomaly.

That your memorialists therefore trust that the bill proposed may embody a measure by which, on summary conviction before the local civil authorities, the above evils may in future be remedied.

Signed, on behalf of the Association,

EDWARD MILNER, Chairman.

JAMES WRIGHT, Hon. Secretary.

GOVERNMENT CONTRIBUTIONS TO SCIENCE.

THE "Museum of Practical Geology," which is represented by the new stone edifice in Jernyn Street, is considerably more imperious in its exactions, demanding no less than £19,000 for objects not very intelligibly specified in the estimate. It takes, however, under its protection a certain dependency in Dublin, entitled "the Museum of Irish Industry," and intended, we presume, either to encourage the growth or preserve the specimens of that rare and curious production. Notwithstanding, however, this serious disadvantage, the performances of the institution are specified as 110 "quantitative analyses of rocks, spica, and soils," 99 "special examinations of soils," and 24 "complete analyses of marble." There are also pending at this moment 47 similar experiments, including 3 analyses of Swedish turnips.—*Times*.

[We think the money might be better disposed of, or at any rate more economically managed.]

On the other hand, it appears there is annually paid for educational purposes, to the Universities of Oxford and Cambridge, each £1000, and to the University of London, £4000.

POISONOUS EFFECTS OF DARNEL.

SOME farm labourers having partaken of food made from barley, with which darnel was mingled, were all attacked with symptoms of narcotico-irritant poisoning; such as vertigo, headache, nausea, vomiting, smallness and irregularity of the pulse, deafness, and cramps. These symptoms, however, went no further, on the cause being discovered and consequently removed. It was found that the darnel was mixed with the barley in about the proportion of one part to ten.—*Casper's Wochenschrift*. X

PROGRESS OF VACCINATION IN TURKEY.

VACCINATION is now publicly performed in Constantinople and other large towns. Four physicians, German, French, and Italian, have been appointed to superintend this duty. At first Christian families only availed themselves of the boon, but eventually the Mussulmans followed their example. There were 2128 individuals vaccinated in Constantinople during the first quarter of 1847.

SHADOWS PRODUCED BY HYDROGEN AND CARBONIC ACID.

IN an interesting lecture recently delivered by Mr. Faraday at the Royal Institution, the lecturer took occasion to advert to the remarkable shadows produced by vapours and gases. In open daylight these were not visible; but when the flame of a candle or spirit-lamp was allowed to project a shadow by strong sunlight on a white screen, a column of vapour in a constant state of evolution, and undergoing remarkable changes, was visible for more than a foot above the source of combustion.

Having blown a soap-bubble, the lecturer caused it to cast a shadow on a white surface by the aid of the oxyhydrogen light: it appeared like a circular area of light bounded by a dark margin; and, when broken, it resolved itself into a number of smaller spheres, only seen by the shadows produced.

When a bubble of hydrogen was thus broken, the small vesicles in shadow were seen to ascend rapidly; and when a bubble of carbonic acid was broken, the small spheres appeared by their shadows to descend like heavy solids. Mr. Faraday adduced this as an instance of extraordinary molecular changes going on in bodies under circumstances not commonly appreciable by the eye, and rendered visible only by the aid of light and shade.

UNIVERSITY OF ST. ANDREWS.—MEDICAL
EXAMINATION PAPERS, MAY 1850.*First Examination.*

TRANSLATE into English:—Medici vero est, cognita natura et causa morbi, judicare quid mutationis requiratur, ut morbus in sanitatem mutetur. Hæc quidem est medicina rationalis sive *Dogmatica*. Est et altera, *Empirica* nimirum, quæ, missis hujusmodi ambagibus, sola remedia querit et profert certa et definita vi prædita ad certos morbos delendos.

Hujusmodi remedia omnis circumforaneus medicus jactat, omnis anus se credit possidere: populusque, qui fere decipi quam sapere mavult, talibus remediis semper fidit; neque profecto, postquam sanitatem cum re amisit, facile sinit gratissimum menti errorem eripi; scilicet quem nolit intueri, adeo blanda est sperandi pro se cuique dulcedo. Quam pauca vero istiusmodi remedia adhuc reperta fuerint, peritissimi medici fatentur et dolent. Quod si remedia quasdam fuerint quæ vi nondum explorata aut intellecta in corpore humano pollent, id minime mirum; quippe quia tot existent morbi quorum natura et causæ prorsus lateant. Cæterum, quo perfectior fuerit scientia medica, eo facilius erit medicamentorum virium, et modi quo corpus afficiant, variisque in morbis prosint, rationem reddere.

1. What are the proximate and ultimate elements of limestone, sal ammoniac, and common alum?

2. What constitutes a neutral salt? What is the meaning of the term, compound radical?

3. What are the principal ultimate elements of vegetable and animal substances, and in what do they mainly differ?

4. State the ordinary mode of preparing tartar emetic, muriate of morphia, prussic acid, and chloroform. How may the strength of dilute prussic acid be chemically ascertained?

5. Mention the most important purgatives, arranging them according to their different modes of action.

6. Name the different preparations of opium occurring in the Pharmacopœia, stating their various degrees of strength.

Second Examination.

1. Describe the chemical composition, and the microscopical characters, of human venous blood; mention the various conditions which accelerate or retard coagulation; explain how the buffy coat is formed: name the different forms of disease in which it is likely to occur; and state whether you regard its presence as a certain indication that venesection is necessary.

2. Explain the changes which respiration

produces in the atmospheric air and in the blood.

3. Describe the circulation within the cranium; mentioning any points in which you think it presents peculiarities, and naming the vessels which convey arterial blood to, and remove venous blood from the brain.

4. Describe the position, form, and structure of the stomach, and mention the changes which the food undergoes in it. Is there any anatomical reason why the act of vomiting is more easy in infant than in adult life? Mention the sources from which the stomach and intestines derive their nerves.

5. Give a brief description of the male urethra, in reference to its length, direction, structure, and relation to adjacent parts.

6. Describe the structure of the ovary. Explain the formation and appearance of the corpus luteum, and state what inferences you draw from the presence of one or more of these bodies in the ovary.

Third Examination.

1. What are the ordinary symptoms of suppuration? Explain how pus is formed, and describe its general and microscopical characters.

2. Describe the symptoms and treatment of delirium tremens.

3. Describe the structural changes, symptoms, physical signs, and treatment of the different stages of pneumonia.

4. Mention the leading points of distinction between gout and rheumatism. Describe briefly how you would treat a gouty patient during the paroxysms and during the intervals, and prescribe (without any abbreviations) a draught containing colchicum, and a warm aperient draught suitable to the assumed case.

5. Point out the leading differences between rubella and scarlatina, in reference to the latent period, the appearance and form of the eruption, the principal complications, and the sequelæ. Describe the general characters of the dropsy that frequently follows scarlatina, and state how it should be treated.

6. What treatment must be adopted in cases of poisoning by arsenic, corrosive sublimate, sugar of lead, oxalic acid, and opium?

7. Explain the pathology and treatment of phlegmasia dolens.

8. Specify the causes, symptoms, and treatment of retention of urine.

List of Gentlemen who had the degree of M.D. conferred upon them by the University of St. Andrews, on the 4th May, 1850.

Scholes Butler Birch, M.R.C.S.L. and

L.A.C., Lancashire; Charles Crighton Bramwell, M.R.C.S.L. and L.A.C., North Shields; Henry Cholmeley, M.R.C.S. Lond., Lincolnshire; Robert Crawford, Lic. Faculty of Physicians and Surg. Glasgow, Glasgow; John Tasker Evans, M.R.C.S. Lond. and L.A.C., Hertford; Robert Hicks, M.R.C.S. Lond. and L.A.C., Hertford; William Highmore, M.R.C.S. Lond. and L.A.C., Dorsetshire; James Keiran, M.R.C.S. Lond. Dublin; Thomas M'Cheane, M.R.C.S. Lond., Cork; John M'Gilchrist, M.R.C.S.E., Lanarkshire; Joseph Ozanne, M.R.C.S.E., Lancashire; George Peacocke, M.R.C.S.E., Yorkshire; Alexander A. Prout, M.R.C.S. Lond., Middlesex; Richard Ross, L.R.C.S.I. Co. Donegal, Belfast; Edward Williams, M.R.C.S.E., Denbighshire.

THE ADULTERATION OF ISINGLASS.

FROM the investigations of Messrs. Warrington and Redwood, it appears that there is a very clever method now adopted by a certain class of commercial thieves, of adulterating isinglass with common gelatine prepared from bones and skins. The pure isinglass and sheet gelatine are moistened and rolled together, by which process they become thoroughly united, and the compound mass is afterwards cut like isinglass. The fraud is all the more successful by reason of the sheet gelatine being placed between two layers of pure isinglass. Such a fraud cannot be distinguished by the eye. The distinctions pointed out by these gentlemen are—1. *Cut isinglass* macerated in cold water becomes opalescent. The shreds are firm, and when examined under the microscope they have a fibrous character. *Cut gelatine*, similarly treated, assumes a transparent appearance, this effect increasing with prolonged maceration. The shreds will swell up and soften, and ultimately become disintegrated. On examining a thin slice of the softened gelatine under the microscope, it does not present the appearance of a fibrous, but rather of a flaky structure.

2. *Cut isinglass*, macerated in cold liquor potasse, speedily becomes transparent; and after the lapse of a few hours, if occasionally stirred with a glass rod, it will be dissolved, forming a clear and colourless solution. After allowing the solution to stand for some time, a *very slight* flocculent precipitate will be deposited, which, in operating on twenty or thirty grains of the isinglass, will be scarcely perceptible. *Cut gelatine*, treated in the same way, becomes opaque; even those specimens which were so, to a certain extent, previously, will assume increased opacity after their immersion. The gelatine will ultimately

dissolve, as does the isinglass, but the solution will not be transparent, and after standing for some time a *copious* flocculent precipitate will be deposited.

On carefully incinerating *isinglass* in a platinum crucible, an ash of a *reddish colour* is obtained, amounting to 0.5 per cent. ($\frac{1}{2}$ a grain in 100). This ash consists principally of carbonate of lime.—2. On incinerating gelatine, as above described, a *voluminous white ash* is obtained, amounting to 3 per cent. (3 grains in 100). This ash, like the former, consists principally of carbonate of lime. Three per cent. is the smallest amount of ash obtained from any of the specimens of gelatine operated upon, but some specimens yield more.

. We will add a distinction which we have been in the habit of employing. An aqueous solution of gelatine obtained from bones yields an abundant precipitate of lime when oxalate of ammonia is added to it. We have not found this precipitate to be produced when the test was added to an equally strong solution of isinglass, except in those cases where the genuineness of the isinglass was open to suspicion.

Gelatine prepared by means of an acid has, when dissolved, a well-marked acid reaction. A solution of pure isinglass should be neutral.

ABYSSINIAN REMEDY FOR HYDROPHOBIA.

A ROOT, called *Deratator*, is employed in Northern Abyssinia, as a cure for hydrophobia. The plant which furnishes this root grows in low warm regions. The bark of the root is removed and powdered. From ten to twelve grains are given as a dose, in honey or milk. The effects produced are violent purging and vomiting, with profuse diuresis. M. d'Haricourt states that he witnessed the beneficial effects of this medicine in two dogs, and on a soldier.—*Comptes Rendus*. X

ON THE PASSAGE OF HYDROGEN THROUGH SOLID BODIES.

M. LOYET states that he has passed hydrogen gas through gold and silver leaf, through double folds of tin leaf, and through thin laminae of gutta serena obtained from a solution of the latter in chloroform. The same author, however, adds that he has not been able to effect its transmission through the thinnest plate of glass. X

MEDICAL APPOINTMENT.

DR. ROBERT BARNES has been elected to the office of Obstetric Surgeon to the Western General Dispensary, Lisson Grove, vacated by the resignation of Dr. Henry Bennet.

THE CHOLERA AT PRAGUE.

THE French journals announce that the cholera has recently broken out at Prague, and that it has caused many deaths daily.

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 20th instant:—H. H. Mackmurdo—J. Darwin—S. Warrillow—D. P. Skipton—J. H. Shorthouse—J. E. Dyas—W. D. Fairless—W. Skinner—W. C. Owen.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, the 9th of May:—Daniel Henry George Wildbore, Old Street—Harry Speakman Webb, Oxford—William Bayldon, Royston—William Swift Wade, Leeds—Michael Sweetman, St. John's Street—Joseph Williams, Portloe, Cornwall—Henry Searle Gaye, Minehead, Somerset—Robert Thomas Elsom Cooke—Thomas Moyles, Queen's County—William Gordon Wotton, King's Langley—Harward Kean, Marlborough, Wilts—William Skinner, Stockton-on-Tees—Edward Doyle, Irish Town, Dublin—James Henry Crisp, Bath—Henry Parfitt, Bruton, Somerset.

OBITUARY.

M. GAY-LUSSAC.

It is with regret we this week announce the loss which science has sustained in the death of M. GAY-LUSSAC, an event which took place in Paris on Wednesday, the 8th inst. The name of M. Gay-Lussac has been familiar to every student of chemistry and to men of science for the last half century. An immediate follower of the school of Lavoisier, he devoted himself assiduously, and with the most astonishing success, to the cultivation of his favourite science. His early analyses of the atmosphere in association with Von Humboldt, his improvements in organic analysis, and his investigation of the law of the expansion of gases, would alone have sufficed to gain for him a high reputation; but it may be fairly said that there is not a department of chemical science which he has not enriched or improved by his researches. His great talent lay in investigating and recording facts, not in speculating and theorizing; and his labours have therefore been frequently put to profitable use by others, not always with due acknowledgment. His lectures, although delivered with some rapidity of utterance, were models for accuracy of reasoning and experimental illustration. It is many years since we had the satisfaction of attending

the course of this eminent philosopher, and we shall never forget the profound silence and interest with which he was listened to by probably not fewer than a thousand hearers.

In 1804 he made a balloon-ascent into the atmosphere, and reached the enormous elevation over Paris of 23,000 feet—i. e. an altitude nearly equal to the summit of the Himalayas. He brought down a specimen of the atmosphere from these lofty regions, and submitted it to careful analysis, with the well-known result that its composition was as nearly as possible identical with that of the air taken from the surface.

The researches of Gay-Lussac are not to be found in distinct treatises, but scattered through the numerous scientific periodicals of the day; and we think their collection and publication would be beneficial to science.

To those acquainted with this eminent man we need hardly say that he was as modest in speaking of his own labours, as he was liberal in awarding praise to others for their researches. He has died in a good old age, and has left behind him a name not likely to be soon erased from the records of science.

THOMAS HULL, ESQ., M.D.

On the 27th ult., at Lytham, Thomas Hull, Esq., M.D., late of Beverley, in the county of York, aged 75.

STEPHEN LAWSON, ESQ.

Suddenly, on the 4th inst., at Cork, Stephen Lawson, Esq., surgeon, 7th (Queen's Own) Hussars, much regretted by his brother officers.

WILLIAM HUGHES, ESQ.

At Leicester, on the 8th inst., William Hughes, Esq., surgeon, of 14, Basing Lane, Cheapside, aged 38.

JOHN MOUNTFORD, ESQ.

On the 13th inst., suddenly, John Mountford, Esq., surgeon, of Gloucester Street, Queen's Square, aged 68.

THE GLOUCESTERSHIRE MEDICAL ASSOCIATION AND MEDICAL REFORM.

At a special general meeting of the Gloucestershire Medical and Surgical Association, held on Monday, the 6th May, 1850, to consider "An answer from the Council of the Royal College of Surgeons of England, to a communication from Secretary Sir George Grey (dated March 2d, 1850); and also "the Resolutions of the Council of the Royal College of Surgeons of England respecting certain alterations deemed necessary in the charters and bye-laws of

the College; and to which they request the sanction of the Secretary of State for the Home Department (dated April 23d, 1850).

It was unanimously resolved.—

That the general scheme of Medical Reform proposed by the Royal College of Surgeons of England receives the cordial approbation of this Association, as it is considered to embrace the following points, which have always been advocated by the Association:—

1st. The superintendence of the profession by a supreme board or council, ensuring thereby a high and uniform qualification throughout the empire.

2dly. A reciprocity of practice in the three kingdoms.

3dly. The authorised registration and notification of all qualified practitioners.

4thly. Securing the public against the pretensions and malpractices of uneducated and dishonest persons.

5thly. The examination of candidates for admission into the profession by a combination of the Royal Colleges of Physicians and Surgeons, assisted by examiners in midwifery and pharmacy, "rather than by a trading Company."

6thly. The reform and organization of the profession to be completed by an amicable alliance and union of the Colleges with the Universities, and an obligation on all to pass through the same probationary gradations and examinations, and enter at one and the same professional portal.

Resolved, secondly,—

That in the proposed alterations in the Charters of the Royal College of Surgeons of England, this Association extremely regrets to perceive that the right of voting for Councillors is not extended to Members of the College in general, irrespectively of their holding the Fellowship.

They also object to the proposal that eligibility for the office of Councillor should still be restricted to those Fellows who reside within five miles of the London Post-Office; and they most strongly urge the removal of this restriction.

FATAL HYSYTERIA.

A YOUNG woman, of previously dissipated character, an inmate of the house for a few weeks, died, in the summer of 1847, with symptoms resembling those of an ordinary hysterical paroxysm, no organic disease being discoverable. Partial paralysis of the lower limbs, with occasional pain in them, had been the most permanent disorder. Congestion or inflammation within the spinal sheath was inferred.—*Notes of Hospital Cases, by Dr. Harlshorne, in American Journal of Med. Sciences, Jan. 1850.*

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, May 11.

BIRTHS.		DEATHS.	
Males....	643	Males....	430
Females..	677	Females..	427
1830		857	

CAUSES OF DEATH.

ALL CAUSES	857
SPECIFIED CAUSES	850
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	146
<i>Scarific Diseases, viz.:</i>	
1. Dropsy, Cancer, &c.	43
2. Brain, Spinal Marrow, Nerves, and Senses	128
4. Heart and Bloodvessels	37
5. Lungs and organs of Respiration	137
6. Stomach, Liver, &c.	50
7. Diseases of the Kidneys, &c.	16
8. Childbirth, Diseases of Uterus, &c.	5
9. Rheumatism, Diseases of Bones, Joints, &c.	9
10. Skin	2
11. Old Age	27
12. Sudden Deaths	0
13. Violence, Privation, Cold, &c.	18

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox	4	Convulsions	41
Measles	14	Bronchitis	51
Scarlatina	25	Pneumonia	55
Flooping-cough	36	Phthisis	116
Diarrhoea	8	Lungs	5
Cholera	0	Teething	6
Typhus	26	Stomach	4
Dropsy	15	Liver	7
Hydrocephalus	22	Childbirth	4
Apoplexy	27	Uterus	4
Paralysis	23		

REMARKS.—The total number of deaths was 13 below the average mortality of the nineteenth week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer	29.57
Thermometer	46.7
Self-registering do. Max. 55.3 Min. 28.3	

• From 12 observations daily. • Sun.

RAIN, in inches, 1.19.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 8° below the mean of the month.

NOTICES TO CORRESPONDENTS.

We have to acknowledge the receipt of two additional Lectures from Dr. Jamieson.

Mr. Hodgson's request has been attended to.

The papers of Dr. Hall and Dr. Soltau have been unavoidably postponed until next week.

RECEIVED.—Mr. C. Willans.

Notice.—We have to request that all ADVERTISEMENTS may be addressed directly to MESSRS. LONGMAN AND CO. Paternoster Row, and marked on the outside "ADVERTISEMENT." Great delay in the insertion has arisen from their having been addressed to the EDITOR of the Journal.

Lectures.

THE

LUMLEIAN LECTURES FOR 1850.

Delivered at the Royal College of Physicians.

By R. B. TODD, M.D. F.R.S.

ON THE PATHOLOGY AND TREATMENT OF
DELIRIUM AND COMA.

LECTURE III.

What organ or parts are affected in delirium and coma?—The brain the organ of consciousness—parts of the brain essential to consciousness—Delirium an affection of the intellect—Coma an affection of the consciousness—Seat of the diseased action in delirium—Seat of the diseased action in coma—Nature of the morbid processes which can cause delirium and coma—Influence of certain narcotic poisons in producing delirium and coma—Flourens' doctrine of a special elective affinity between certain poisons and certain parts of the encephalon—Immediate effect of one of these narcotic poisons on the brain—Congested state of the brain in poisoning by opium—Is the congestion the cause of the change in the brain's mode of action?—A certain degree of exhaustion necessary to produce delirium, in addition to a poisonous influence—illustrated by delirium tremens—Case—Evidence of poisoning of the brain by alcohol—Percy's observations—Influence of alcohol in altering the qualities of the blood—State of the urine in cases of delirium—Humoral view of the pathology of delirium tremens—Is there any inflammatory process in delirium tremens?—Analogous points in the pathology of the renal epileptic delirium—Poisoning of the blood by urea—Condition of the blood in chronic renal disease—In simple epileptic delirium the blood is probably poisoned—The same views applicable to the explanation of rheumatic and gouty delirium—to that of erysipelas and of typhus—Hysterical delirium referred to the same category as epileptic—Pathology of coma—Delirium and coma result from different degrees of poisoning—Coma likewise due to paralysis from exhaustion of nervous power—Conditions similar to those which produce delirium exist in the different forms of coma—General principles of treatment in delirium and coma—Objections to treatment by bleeding—The use of opium not applicable to all forms—Conclusion.

I MUST here briefly recapitulate the conclusions to which the facts which I have

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detailed in my first and second lectures have led me as regards the clinical history of delirium and coma. These are—

1st. That the introduction of certain poisonous agents into the blood, either directly or through the digestive organs, is capable of producing delirium and coma.

2dly. That a deteriorated and poisoned condition of the blood is favourable to the production of delirium and coma, as in the cases of rheumatic and gouty delirium and coma, and of the delirium and coma of typhus, erysipelas, and the exanthemata.

3dly. That the same state or states of brain which are favourable to the production of epileptic convulsions are likewise favourable to the development of delirium and coma.

4thly. That the anæmic state, or that state of blood in which the colouring matter is very deficient, is highly favourable to the production of delirium and coma.

5thly. That a shock to the brain—*concussion*—may produce coma, and likewise delirium; and that compression of the brain will produce coma, but not delirium.

And, lastly, that in all these cases the delirium or the coma may occur in their highest degrees without the slightest evidence of any inflammation of the brain or of its membranes.

But I must state, in addition to all this, that although, in the vast majority of instances, delirium and coma, even in their most highly developed states, occur independently of inflammation, nevertheless inflammation of the membranes of the brain is undoubtedly capable of producing both delirium and coma, and that it is often a matter of great difficulty to distinguish between the inflammatory and the non-inflammatory affections of this kind. The subject of inflammation of the brain is a large and most important one, which the time allotted to these lectures will not permit me to discuss now. I must content myself with observing that inflammation of the brain is, in adult subjects at least, a rare disease; and, therefore, that delirium and coma arising from this cause is of rare occurrence as compared with those other forms which I have described, and that the inflammatory delirium is generally of a low kind, resembling that of typhus, and has a great tendency to pass into coma; and, further, that it is frequently ushered in by vomiting, and accompanied by a marked sluggish and slow state of the pulse.

We now proceed to inquire whether any adequate theory of the pathology of delirium and coma can be formed in the present state of our knowledge, both physiological and clinical? This inquiry involves

answers to these queries:—1. What part—what organ—is affected in delirium and coma? 2. What is the nature of the affection, and is that affection the same for each and all those various forms of delirium and of coma which clinical study teaches us are apt to occur?

With regard to the first question, it is quite clear that we cannot assign any other seat for these remarkable states than the nervous system: nor can we locate them in any other part of the nervous system than in that part which is connected with the actions of the intellect, and with that reciprocal influence between mind and body which constitutes consciousness. Can we assign them their seat in the spinal cord? Certainly not; for we know that mental phenomena are completely independent of the spinal cord. The mind may act even when the connection between the cord and the brain is cut off, of which we have many proofs both in clinical observation and in physiological experiment. The removal of the hemispheres of the brain will destroy the phenomena of thought and of consciousness; but the spinal cord may be taken away piece by piece, leaving intact the centre of respiration, and mental phenomena will continue unaffected, save so far as concerns the partial affection of consciousness which necessarily must result from severing the connection between the encephalon and those parts of the body whose nerves are implanted in the separated portions of the spinal cord. We are conscious of the existence of our limbs through the connection of them with the spinal cord, and the connection of the spinal cord with the brain. So long as the trunks of the nerves of a limb are implanted in a state of integrity in the spinal cord, and so long as the connection between the cord and the brain is intact, so long will the consciousness of the connection of that limb with the body remain,—so long will the mind continue to have the feeling of the connection of that limb: and it is remarkable that that feeling may be fallacious; for it will exist even after the limb has been amputated, if only the conditions which I have mentioned are present—namely, the integrity of the trunks of the nerves, and of their implanted roots. Nor can it be got rid of even after a long interval of years has elapsed from the time of the amputation. The nerves of the limb are the media of connection between the organ of consciousness, or, in other words, the centre of sensation and the limb; and the trunks of the nerves contain in them every fibril which is destined for every point of the limb,—for every fibre of its muscular system. So long, then, as these fibres are intact as regards their nutrition

and their central implantation, so long are these conditions sufficient to uphold the feeling or consciousness (fallacious though it be) of the presence of the limb, and of every part of which those fibres form an integral and most important portion.

Early last winter a girl was admitted into King's College Hospital, in whom I had the opportunity of observing the effects of the gradual separation of the spinal cord from the brain.

When she was admitted she was suffering from a paralytic state of the left arm and leg, which in many respects resembled that form of paralysis which we often see in hysterical women, so that I was led at first to regard it as a case of hysterical paralysis. I soon, however, discovered a swelling at the upper part of the cervical region of the spine, and a distorted state of the neck, owing to a paralysed state of the muscles of one side, and the consequent disturbance of the equilibrium between the antagonising muscles of the opposite side. It was then found that all the muscles of one side were paralysed which are supplied with nerves below the level of the second vertebra of the neck—the cervical muscles, the intercostals, the abdominal muscles, and the muscles of the extremities. After a little while the paralysis began to affect the muscles of the right side of the body: the right arm first, then the leg, then the intercostal and abdominal muscles; the breathing became extremely feeble, and in parts of the lungs the most attentive auscultation could not detect any respiratory murmur. At length the breathing fell considerably in frequency, and it took place by gasps, at intervals of twenty seconds, the only muscles which seemed to retain any power being the sterno-mastoid and the trapezius, which are supplied by the spinal accessory nerve. During all this time the mind remained clear and free from any delirium, although during the greatest part of it fully three-fourths of the body was withdrawn from the controlling power of the will.

In this case the medulla oblongata was severed from the spinal cord by the gradual compression of an enlarged odontoid process, over which there was a considerable growth of cartilage, which no doubt, by a rapid development, contributed to the ultimate rapid extension of the separation.

It is impossible to conceive a more remarkable instance of “dying by inches” than was afforded by this case. The severance of the spinal cord from the medulla oblongata took place in the most gradual manner, and therefore without any of that shock to the nervous centres which is so apt to complicate the results of physiological experiments. It was most in-

teresting to witness how slowly, and by what small degrees, the connection of brain and trunk was being dissolved, and how instantaneously death took place, by the annihilation of respiration, the moment the last connecting link gave way. Yet, up to the time when respiration became so impeded that the blood was imperfectly aerated, consciousness and intellectual power remained.

The brain or encephalon, then, is that part of the nervous system which is most directly and most intimately connected with the mind—upon which the mind exercises a direct influence, and which, in return, exercises an influence upon the mind.

Yet the brain itself is a most complicated organ in man and the higher animals; and therefore we shall have to inquire what parts of this organ are essential to a normal manifestation of the intellectual actions, and to the maintenance of consciousness.

Time would fail me were I to enter upon a full physiological discussion of these points. I must content myself with stating that there are the most conclusive reasons for regarding the convolutions of the brain as that part which is connected with intellectual change—as “the centre of intellectual actions.” It is the part of the brain which is most intimately connected with, and most readily affected by, the mind; and it is that layer of grey or vascular matter so intricately folded upon the surface of each cerebral hemisphere which is the seat of those unceasing changes which thought may produce, or which may excite thought. It is, therefore, reasonable to believe that any departure from the normal condition of this centre would create a corresponding disturbance or derangement of the intellectual action; or, if we admit that the mind may be disturbed primarily and independently, as I think must be admitted, then it may be stated that that primary disturbance of the mind may derange and disturb the nutrient actions of this centre.

Consciousness is feeling: the simplest act of sensation indicates consciousness—such an act is the most simple condition of consciousness; any intellectual act is also an indication of consciousness. “When I smell a rose,” says the late Mr. Mill, “I am conscious; when I reason, I am conscious; when I remember, I am conscious; when I believe, I am conscious; * * *” “If we are in any way sentient, that is, have any of the feelings whatsoever of a living creature, the word conscious is applicable to the feeler, and consciousness to the feeling.”

It is important further to remark, that “the sensation is not the object of consciousness different from itself, but a par-

ticular sensation is *the consciousness* of the moment; as a particular hope, or fear, or grief, or resentment, or simple remembrance, may be the actual consciousness of the next moment.”

In order, then, to understand the physiological conditions necessary for the maintenance of consciousness, we must analyse a simple act of sensation. When I smell a rose, what are the physiological phenomena? First, there is an impression made upon the sentient nerves; secondly, the change wrought in these nerves is propagated to the centre of sensation; and thirdly, this change produced in the centre of sensation *must be perceived* by the mind in order that a true act of sensation shall be accomplished. Thus, in the act of sensation we have two classes of phenomena—one physical, proceeding from periphery to centre; the other mental or intellectual, by which all physical change is recognised. The impression of the odiferous particles on the olfactory nerves, and the subsequent change in the centre of sensation, is the physical part; the perception by the mind of that change is the mental or intellectual part. My mind may be occupied with some engrossing subject at the time the rose is presented to the organ of smell: the physical phenomena will, nevertheless, take place; odiferous particles will impinge upon the olfactory nerves, and the change will be produced in those nerves, and in the centre of sensation, but the mind being occupied with some other object will not perceive the change in that centre, and therefore there will be no sensation: I shall not be conscious that such an object was presented to the organ of sense.

Thus, then, for this simplest act of consciousness, the co-operation of two parts of the brain is necessary—namely, the centre of sensation, or that part which is destined to receive sensitive impressions, and the centre of intellectual actions. The failure of the right mode of action of either of these will prevent the completion of the act of sensation. Either the physical part may fail, or the mental part.

When a man is brought under the influence of chloroform, he is incapable of sensation—partly because the centre of intellectual actions is paralysed by the influence of the chloroform, and partly because the nerves are similarly affected.

But when a man in traumatic delirium is insensible to the irritation which must be created when he moves the injured or broken leg, or in rheumatic delirium, the rheumatic joints, he is so because his centre of intellectual action is entirely engrossed with the rapid train of ideas and fancies which occupy his mind; and therefore he

does not perceive the irritant change which must be produced in the nerves of the limb by the movement and displacement of the injured part.

Now the centre of intellectual actions is the hemispheric lobes of the brain or the convolutions: the centre of sensation is, as I have shown in my Lumleian lectures of last year, and also elsewhere, the optic thalami and their downward continuations, the olivary columns of the medulla oblongata, and the posterior horns of the grey matter of the spinal cord.

These, then, are the parts which are concerned in consciousness; and an affection of either or both of a certain kind must more or less affect the consciousness: an affection of the centre of sensation, by cutting off the object of consciousness—an affection of the intellectual centre, by impairing or destroying the power of perception.

An affection, however, of the centre of sensation *alone* cannot impair or destroy consciousness, because still the centre of intellectual action remains intact. Such an affection may destroy particular kinds of consciousness; but still there remain thinking, belief, memory—all which are acts of consciousness, although the evidence of their integrity rests chiefly with the individual himself. But an affection of the intellectual centre may impair or destroy consciousness even although the centre of sensation remain uninjured in any way; for it is evident that no impression, however vivid, upon the centre of sensation, can become a sensation, if the action of the intellectual centre be suspended, and the power of *perception* be thus destroyed.

Thus, then, we arrive at this conclusion, that to impair or destroy consciousness, the part of the brain which must be injured or suspended in its action must be the hemispheres—the convoluted surface—either alone or in conjunction with the centre of sensation—namely, the optic thalami and their downward continuations.

Now delirium is an affection of the intellect: coma is an affection of the consciousness.

The seat of diseased action which may cause delirium is, therefore, the centre of intellectual actions—the convolutions of the brain—or such parts as are so intimately connected with them that the nutrition of the one cannot be disturbed without the disturbance of that of the other.

The seat of the diseased action which may cause coma is the same centre; with or without the centre of sensation; or the morbid process may begin in the centre of sensation, destroying certain kinds of consciousness, and may extend to the intellectual centre, making the coma complete.

From this circumstance, then, namely, the sameness of the seat of the morbid changes which are capable of producing the two states of coma and delirium, we obtain some clue to explain the remarkable analogy which we have observed to exist between the two affections as regards the circumstances under which they are apt to occur.

Having thus fixed the seat of the morbid processes which cause delirium and likewise coma, we come next to inquire what is the nature of those morbid processes.

We may obtain, I think, very satisfactory information upon this subject by referring to the circumstances under which the various forms of delirium and coma occur.

1. We know that the inhalation of chloroform and of ether will cause both delirium and coma; that the ingestion of alcohol, of opium, of Indian hemp, and other narcotic drugs, will cause delirium and coma.

A moderate dose of any of these poisons will cause delirium: a large dose will cause coma.

It seems necessary for the production of these morbid states that the poisonous material should find its way into the blood; and we know that their direct introduction into the blood is the most effectual way of creating the two states.

In such cases, then, the cause of the delirium and coma is clearly humoral. A poison circulates in the blood which has an affinity for the vesicular nervous matter of the brain, and which, therefore, disturbs its nutrition. No part is more obnoxious to the influence of any poisonous agent which may be circulating in the blood, as the vesicular matter of the convolutions of the brain; for no part is more abundantly supplied with blood-vessels. The pia-mater which lies in contact with the whole of this undulating surface is a membrane of blood-vessels from which innumerable minute vessels penetrate the vesicular matter. A piece of this grey matter of the convolutions successfully injected, appears perfectly red, from the multitude and the proximity of the blood-vessels; and there is no other vesicular matter in the brain except that of the laminae of the cerebellum which is so largely supplied with blood-vessels.

It was Flourens, so far as I know, who first broached the ingenious idea of a special elective affinity between certain poisons and certain parts of the brain, whereby he explained their tendency to act primarily and specially upon one part in preference to another. Thus alcohol will act primarily upon the cerebellum, and give rise to the unsteady gait of the drunkard by impairing the co-ordinating power of that centre; carried to a higher dose it affects the intellectual centre and causes delirium, and

ultimately coma. Belladonna affects primarily the centre of sensation, and particularly the special centre of implantation of the optic nerves: whence the dilated pupils and the amaurosis which arise from the use of this drug; and afterwards, the belladonna, having paralysed the centre of sensation, destroys the powers of the intellectual centres, and causes coma.

Now what is the immediate physiological effect of a large quantity of any of these narcotics on the brain?

On examining the brains of persons dead of poisoning by opium or by belladonna, the vessels of the brain are found turgid with fluid blood.

It is this congestion, some will say, which causes first the delirium, and afterwards the coma. The effect of the opium is to cause congestion: the effect of the congestion is to compress the brain.

But this explanation will not bear the test of careful examination. The congestion is rather the effect of the injury done to the brain and to the blood by the opium, whereby the attraction of materials from the blood, suited to the nutrition of the brain, is retarded, and ultimately stopped. Now this force of attraction between the blood and the tissue is a powerful agent in the maintenance of the capillary circulation: when, therefore, it is impaired, the blood moves slowly and feebly through the capillary system, and there is need of increased force on the part of the heart to keep up the circulation at all. Hence, then, in cases of this kind, the congestion is due to the condition of the blood itself,—in fact to its contamination by the poison which has been introduced into it.

Nor can we discover in the brain tissue itself any evidence of its having undergone compression, such as one might fairly look for as the result of over-distension of the blood-vessels.

Furthermore, if we look at the mode of accession of delirium tremens, we shall find that there is another condition requisite for the development of the malady besides the ingestion of alcohol. This is an exhausted and depressed state of the whole system caused by the withdrawal of the stimulus, or by the use of antiphlogistic remedies, or by the loss of blood, or by the privation of food.

I shall give a good illustration of this in a case which occurred to myself. I had on several occasions attended a gentleman of high professional position for illnesses brought on by the use of brandy and wine in undue quantity. These illnesses always consisted in attacks of vomiting, with tenderness of the epigastrium, and more or less of sleeplessness. I found that the best means of correcting these symptoms was

by small doses of calomel and opium,—starvation,—iced water.

He had one of these attacks the end of last year, which yielded very readily to the treatment pursued, in the course of three days, and on the fourth day I allowed him a mutton chop and one glass of wine. I should have been more liberal in my allowance had I known that during the previous night he had threatenings of the horrors. In the evening of the day on which he had the chop and wine,—the first food of a substantial quality which he retained on his stomach for some days,—he began to have illusions, to fancy he saw persons in the room, and to see black-beetles crawling over him. This, however, passed off, and he slept for an hour or two. When he awoke, the illusions came on stronger than before: he got up in a rage, and went to his servant's room adjacent, collared him, and accused him of introducing strange men into his room for the purpose of robbing him. The delirium now manifested itself in full force, but yielded very readily to the free administration of alcohol and opium.

A preliminary condition, however, necessary to the development of delirium tremens is a deterioration of the blood by alcohol. No doubt exists now that in cases of poisoning by alcohol the alcohol enters the blood, and by a very rapid absorption. It seems certain that alcohol is one of those substances which is directly absorbed into the bloodvessels of the stomach without undergoing any change in that organ; for M.M. Bouchardat and Sandras have detected it in the veins of the portal system; and Dr. Percy has added to our knowledge the important and interesting fact, that alcohol appears to have a special affinity for nervous matter, for he found it in animals poisoned by alcohol in the brain, in large quantity, and in considerably greater proportion, than in an equivalent quantity of blood,—a highly significant fact, explanatory of the injury done to the nervous system by the habitual use of stimulants of this kind in undue quantity.

When alcohol is taken into the system, then, it enters the blood directly unchanged, and it is eliminated partly as alcohol,—at the lungs, at the liver and the kidney, for Dr. Percy detected it in both those fluids. Now at each of these places it must injure the blood,—at the lungs, by attracting a portion of the oxygen which ought to go to the blood itself, thereby diminishing the oxygenation of that fluid,—at the liver and kidneys, by interfering with the eliminating power of those organs for their appropriate materials; for there can be no doubt, from the frequent occurrence of

disease of the liver and kidneys in habitual drunkards, that it must materially affect the nutrition, and therefore the secreting power of those glands.

But as the alcohol is eliminated only in very small quantities at the three points I have mentioned, it is highly probable that it undergoes chemical change in the blood; that it attracts the oxygen of the blood, and becomes converted into carbonic acid and water. Thus it would rob the blood of some of its oxygen,—it would supply carbon in perhaps deleterious quantity,—and it would increase the quantity of water. This increased proportion of water in the blood would seem to be by no means favourable to the natural changes of the blood itself, by which I mean more particularly those connected with the development and growth of the blood particles,—especially the red particles.

Hence we so commonly find habitual drinkers pale and flabby, as if their blood contained too much water and too little colouring matter; and, in the absence of any satisfactory analysis of the blood of such persons, it may be stated that the fluid is probably defective in its solid ingredients, especially its colouring matter, and contaminated probably by some of the principles of the bile and urine, and by some other compound derived from a depraved secondary assimilation of the brain.

We are as yet greatly in want of sufficiently numerous and accurate analyses of the blood and urine in this as in all the varieties of delirium. Dr. Benze Jones some years ago pointed out that in cases of delirium tremens the discharge of phosphates by the urine is almost completely suspended; but these observations were made upon very few cases, and I am not aware that they have received confirmation from subsequent observers. In a few analyses of the urine of patients labouring under chronic epilepsy, and addicted to habits of intemperance, made for me by my friend Mr. L. Beale, jun.,—than whom I know no more competent chemist,—I have not found a deficiency of phosphates, but rather an increase. But this is clearly a point requiring extensive and minute investigation, great precaution being used as to whether the phosphates discharged are due to any peculiarities in the food, or to any excessive waste in the nervous matter, of which phosphorus forms an important ingredient.

I think I have now stated enough to enable me to enunciate a theory of the pathology of delirium tremens. I would lay it down, then, that it is a delirium essentially humoral in its origin,—due to a perversion of nutrition, and especially of the nutrition of the brain, by the slow and constant in-

gestion of a poison—namely, alcohol; and that the poisonous element which contaminates the blood, and which is left free to exercise its destructive and irritating influence upon the brain, when the powers of the system are exhausted, and the blood impoverished by bad living, and the employment of depressing remedies; that this poisonous material is a compound partly of alcohol itself, partly of some material derived from a depraved destructive secondary assimilation of the brain itself,—a material analogous to, if not identical with, that which probably is apt to be developed in the blood in epilepsy, and which by its periodical accumulations gives rise to the paroxysms of that disease.

This view of the pathology of delirium tremens will, if carefully compared with what we know of its clinical history, afford an adequate explanation of that disease. The peculiar affinity of alcohol for the nervous tissue explains the early signs of enfeebled nervous power manifested by habitual spirit drinkers; the assumption of the existence of a poison in the blood distinct from alcohol, but generated in consequence of the habitual ingestion of that fluid, will explain the production of the delirium in the absence of the accustomed alcoholic stimulus; and the control which experience tells us may be obtained over the delirium by giving new supplies of alcohol, and by opium, indicates that the peculiar state of the blood which is generated by a long continuance of an enfeebled and depraved nutrition is highly favourable to the production of the phenomena.

Moreover, we find in this view of the pathology of delirium tremens a satisfactory explanation of the absence in recent cases of all signs of lesion of the brain, and the presence in cases of long standing of morbid changes precisely resembling those seen in chronic epilepsy. The ingestion of alcohol, even in large quantity, does not produce acute inflammation of the brain: it exalts the nervous power—it excites the battery to its highest point,—but it does so at the expense of an extreme waste of the nervous material, and of the generation of a new matter, which is deposited on the membranes and among the bloodvessels, giving rise to those opacities and thickenings of the membranes which are found in the advanced stages of this disease, as well as of epilepsy. I have several times examined the opacities of the arachnoid membrane, which are found in cases of this kind, and have always found them to consist of an accumulation of a fatty material analogous to what we find in the coats of arteries, and which is deposited in the tubes of the kidney, or in the cells of

the liver, and which sometimes takes the place of the true sarcoous or fibrinous element within the sarcolemma of the muscular fibre.

[To be continued.]

Original Communications.

BED-SIDE SKETCHES.

BY JOHN CHARLES HALL, M.D.

Fellow of the Royal College of Physicians, Edinburgh; Member of the Royal College of Surgeons, London; Author of "Remarks on the Treatment of some of the more important Diseases, including the principal Diseases of the Eye," &c. &c. &c.

"Concordiæ res parvæ crescunt."

[Continued from p. 730.]

No. VIII.—THORACIC CONSUMPTION.

[Concluded.]

3. Treatment of Thoracic Consumption.

HITHERTO we have considered how the deposition of tuberculous matter in the lungs may be best prevented; it remains to examine how thoracic consumption can be arrested in its progress when incipient, or limited in degree, and how the pillow of the sufferer may be best soothed when the disease has made such progress as to preclude all hope of preventing, soon or late, a fatal termination. Dr. Latham has very properly divided phthisis into the *mixed* and *unmixed*; and this division is of practical importance; for our treatment, both with regard to diet and the remedies administered, must be so regulated as to give every support to the system; but at the same time care must be taken not to set up an inflammatory action in the pulmonary tissue around the tubercles. It is, therefore, quite impossible to say, with some authors, animal food and porter is the best diet for patients labouring under thoracic consumption; or, with another, give nothing but asses' milk, rice, bread, and potatoes. Both may be right, and both may be wrong. Every case of this disease presents in itself a study for the physician—every case will demand at his hands the most careful attention, and it will be for him so to regulate the treatment as to avoid either an increase of the local mischief by an over-stimulating diet, or a further de-

generation of the system by reducing the general strength.

In whatever way the strength is reduced the deposition of tubercle will be augmented: in doubtful cases milk and beef-tea may always be given; but if an error be committed it is generally rather by reducing the strength of the patient from a fear of inflammation, than by giving a generous diet.

Some sixteen years ago, we well remember that it was a common practice in London with many practitioners to take small quantities of blood from consumptive patients, especially in families where one or more brothers or sisters had died from the disease; such patients were certain to be kept in warm rooms, and the means employed to prevent their "*taking cold*" were very amusing. Under this plan of treatment patients died very rapidly; and no wonder. Such a system, by depressing the general powers of the body, rendered the deposition of tubercles certain, and induced a rapid increase where such deposition had already taken place. We ought to guard against taking cold in such patients—in such as we are now treating—those in whom tubercles are already present, by sponging the chest with cold vinegar and water night and morning; by constant exercise, either walking, on horseback, or in a carriage; and the use of the shower-bath three times a week. The shower-bath may be used warm at first, and the temperature gradually reduced, until it becomes cold, and there is no more certain way than this, so to "*harden*" the body as to remove the liability to take cold.

In our own practice we place considerable reliance on *counter-irritation*. We are quite certain that in many cases permanent good has resulted from the application of an issue on either side of the chest.* We have now under our care a young lady, and also a young gentleman, in whose lungs tubercles exist, and in both the greatest good has resulted from the repeated application of small blisters to different parts of the chest. The objection to setons and to issues is often great, both on the part of the patient, especially if a young lady,

* "I look on issues and setons as one of the most important means in the prevention, if not in the treatment, of phthisis. I consider their advantage very great."—*Dr. Graves's Clinical Medicine*, p. 262.

and her parents; but let it be told them that the question is not one of like or dislike, but of life and death, and the objection will vanish. A singular example of the efficacy of counter-irritation in phthisis is related by Dr. Abercrombie. In this case cerebral disease had this effect, and the previous symptoms of consumption disappeared. We were consulted two years ago by the family of a gentleman, aged 33, who was then labouring under confirmed phthisis, and in whose left lung a cavity of some size existed. Shortly afterwards he was attacked with mania, and the disease has remained stationary. We remember a case at St. George's Hospital, in which a scrofulous arm was amputated by Mr. G. G. Babington, and the patient rapidly sank from phthisis: this fact has been pointed out by Sir B. C. Brodie, and we have often, when his pupil, heard him say, that after amputating a leg for scrofulous disease of the ankle-joint, symptoms of consumption, not before observed, set in, and the patient died in a short time.

In the absence of hæmoptysis and symptoms of pulmonary congestion, various preparations of steel are of great benefit. It often happens that a young lady or gentleman is brought to your house by a friend, anxious about a slight cough, which the patient ridicules, and characterises as of not the slightest possible consequence. A complaint is made of feeling languid, and every night there is more or less profuse perspiration, and this tendency to night sweats it is very necessary at once to check. The pulse is generally tranquil, and there are no symptoms of hectic fever. There is no dulness on percussion, but the *expiratory murmur* is prolonged; and this is a symptom already noticed as one of the earliest tokens of the tuberculous deposit. For such we prescribe some preparation of iron: our favourite form is this—*R. Ferri Sulphatis*, gr. x.; *Acidi Sulphurici Diluti*, ʒj.; *Tr. Hyoscyami*, ʒij.; *Infusi Cortii*, ʒviiss. *Misce. capiat cochlearia duo ampla ter in die.* Or the following, which is much more pleasant, may be substituted:—*R. Ferri Ammon. Tart. ʒij.*; *Extract. Glycyrrhizæ*, ʒij.; *Syr. Aurantii*, ʒij.; *Aquæ Rosæ*, ʒvijsa.; *Tr. Hyoscyami*, ʒij. *Misce. Capiat, ʒj. ter in die.* The bowels will best be regulated by some such pill at bed-time as this:—*R. Ext.*

Aloes (Aquosi), gr. j.; *Ext. Taraxaci*, gr. vj.; *Pulv. Ipecac.* gr. ʒ. *Misce*, ft. pil. ij. *pro re nata.* Or a draught of the Di-sulphate of Quina, with the Tincture of Hyoscyamus, and a drop of Hydrocyanic Acid, may be substituted for the steel. This plan of treatment,—by counter-irritation, steel, quina, sulphuric or nitro-muriatic acid, with shower-baths, sponging with cold salt and water, constant exercise in the open air, on horseback, or in a carriage, with a nutritious regimen (meat, and bread and milk for breakfast; for dinner, meat, bread, and porter, or bitter beer; for supper, milk and bread, and a little calves feet jelly, and no tea),—will often stop the exhausting perspirations, and check that tendency to debility which so rapidly promotes the formation of tubercles. Quinine and the mineral acids often appear to the patients and their friends singular remedies to cure “*a cough*,” and going out into the open air the mother assures you “*must give her daughter cold*,” but this plan of treatment in the early stages of phthisis we are satisfied is the only rational one, at least so we have found it, after an extensive experience in these diseases for many years.

It is a singular fact, that when the dilute sulphuric acid is combined, as first proposed by Dr. Graves, of Dublin, with the *Tr. of Hyoscyamus*, the remedy is much more valuable, and this combination both gives vigour to the system, and checks the cough, which is apt to be increased by the acid, unless the sedative is added. When the perspirations are unusually troublesome, and do not yield to this remedy, tannic or gallic acid, given three times a day, is occasionally useful. In the first period of thoracic consumption we have given the cod-liver oil in numerous cases,—in many with very great advantage; but it is in the second and third periods of the disease that this remedy has in our own practice appeared most marked in exerting a beneficial influence. We have been furnished, with a view to publication in this journal, with an interesting extract from the journal of a professional gentleman whom we have known for many years, of considerable talents, and who has repeatedly been under our care: in him the hereditary predisposition is as strongly marked as possible, and when we saw him first, his condition appeared so

hopeless, that we are induced to give the preference to this case over many others in our case-book, as exhibiting the value of cod-liver oil in certain constitutions, and at certain periods of the disease.

A. B., æt. 29. "I began in the June of 1848 to take Bell and Co.'s cod-liver oil, in doses of three table-spoonfuls *per diem*, together with nitro-muriatic acid. This I continued till the first of September, 1848, but derived little comparative good from it, which I attribute to my having been very careless as to my diet, eating and drinking most unwholesome things, as well as to the greater portion of the oil which I took (and which was not Bell's) being of an inferior quality. In September I was attacked by pleurisy, and did not touch cod-liver oil again till November, when being in a very reduced state, and weighing about 10st. 4lb., I was recommended to resume it. At this time my cough was violent. I had profuse night sweats, and my expectoration, which was considerable, was frequently tinged with blood.

"I began the oil (which was foreign, *Danish*) by taking a dessert-spoonful twice a day, then I increased to a table spoonful in the morning two hours before rising, and one the last thing before going to bed. This I continued from the 2d of Nov. 1848, to about the middle of January 1849. My weight during this time was as follows:—

1848.	st.	lbs.	
11th Nov.	10	6	} at Brighton.
6th Dec.	11	0	
21st Dec.	11	1½	
1849.			} at Hastings.
22d Jan.	11	6½	

"My diet during this time consisted of a pint of warm milk in the morning, about an hour after the cod-liver oil; for breakfast I had tea, bread and butter, and bacon, with two or more large raw apples; for dinner I had mutton, roast or boiled fowl, some roast beef, and potatoes and turnips; light puddings, tapioca, arrow-root, sago, &c., with roasted apples; and for supper I had a bowl of arrow-root, with a toast: I drank toast-water and weak tea.

"For about three months and a half following the last mentioned period, I only took a table spoonful of cod-liver oil in the morning.

"My weight was:—18th Feb., 11st. 10lb., at Hastings; 17th May, 11st. 8lb., at London. I then left off the use of cod-liver oil almost altogether, or I took it in small quantities, varying from a desert to a tea spoonful. My weight was:—4th July, 11st. 2lb.; 17th, 11st. 2lb.; 16th Aug., 10st. 9lb.;* 27th, 10st. 8lb.; 29th Sept., 10st. 6lb.; 24th Oct., 10st. 9lb.; 23d. Nov., 10st. 5lb.; 17th Dec., 10st. 6lb.; 30th Jan., 10st. 6½lb.; 23d Feb., 10st. 5lb. Highest weight attained, 11st. 10lb., 13th Feb. 1849; lowest weight, 10st. 5lb., 23d Feb. 1850.

"I may observe that the cod-liver oil which agreed best with me, and on which I fattened most quickly, was the *unfiltered*. This I think keeps good the best also: it is to be got very good at Allen and Co.'s, Plough Court, Lombard Street.

"When I was away in the country, contrary to the advice of my physician (Dr Hall), I was bled, and this (September 1848) very much reduced me. I ought to have added that I derived much benefit from his prescription of repeated counter-irritation, by a small blister under each clavicle, and this I have applied very frequently up to this time, and always with great advantage. —Hastings, Feb. 1850. A. B."

When we first saw this gentleman, the disease had reached the second period, and was, in the opinion of one of the most able physicians in this country, almost hopeless. Under the use of the oil, counter-irritation, and an appropriate selection of residence during the winter, a valuable life has been prolonged, and with care and attention it is probable that our friend may live for some years. At any rate, the chances are much more in his favour than when the oil was first taken two years ago.

It would be of no practical importance to give case after case of the results of this remedy in detail, as we have observed them in our own patients. As already stated, the utility of cod-liver oil has been greatest at the time when the process of softening has commenced: the physical signs of softening, characteristic of the second period of thoracic consumption, have been already described. When the patient has laboured for a long time under a severe cough; when he has appeared sinking under copious night sweats, with opaque,

* Allow 4lbs. for light dress.

muco-purulent expectoration; when attacks of hæmoptysis have occurred more than once, and when dullness under one or both clavicles, and above the scapula, defective movement of the chest, and breath-sound,—when there is also beneath the clavicle a moist bubbling sound (*muco-crepitation*), and when tubular breath and voice sounds towards the root of the same lung have fully proved the arrival of the second period of thoracic consumption, cod-liver oil has certainly produced the most wonderful effects. In one gentleman in particular, W. O., a solicitor, aged 29, after taking the oil (when the condition just described was fully developed) for about a fortnight, in doses of two teaspoonfuls three times a day, the perspirations diminished, and in less than a month the expectoration was considerably reduced in quantity, and not so opaque. In six weeks he had lost also a good deal of the crepitus, and under the use of the oil, and counter-irritation, with an embrocation of croton oil, liquor potassæ, and olive oil, the breath sound became less moist and more clear. To this gentleman the oil was given in the compound infusion of orange peel, with a few drops of nitro-muriatic acid, one hour after breakfast, one hour after dinner, and one hour after tea, for the reasons we pointed out in the *MEDICAL GAZETTE** more than a year ago; and we have seldom found the oil, if pure, and of a good quality, objected to when given in this way. If sickness be induced, a drop of hydrocyanic acid (*Scheele's*) may be added to each dose.

Mr. O. went down to the sea-side, and we did not see him again for nearly three months. During the whole time he continued to take the oil, and had gained in flesh and good looks. His appetite was very good, and the night perspirations had left him. He told me he could walk a long distance without fatigue, and that, in fact, he was quite well. On examination, the most satisfactory proof was afforded that a gradual removal of consolidation had been taking place; for, on applying the stethoscope under the right clavicle, where there had been the greatest signs of mischief, the restoration of a clearer breath-sound was most evident. Still, with all this apparent restoration to perfect

health, the foot-marks of the enemy might still be traced. That ugly prolonged expiratory murmur was still present, and a tubular sound towards the root of the lung on the right side could be detected. We advised a seton to be placed under the clavicle on the right side, and the oil still to be continued. It would have been interesting to have traced the condition of this gentleman in after years; but, unfortunately, about three months after this, an attack of typhus fever proved fatal, and no opportunity was afforded of examining the body. Up to the time of this attack of fever, the disease in the lungs had made no progress. He was neither better nor worse than when he returned from the sea.

In one case, even in the last stage of the disease, the powers of the remedy in staying the complaint were very remarkably exhibited; and, without pretending for one moment that cod-liver oil is a specific in thoracic consumption, we may certainly claim for it a power of arresting its progress greater than that possessed by any remedy with which we are at present acquainted. The conclusion arrived at by the physicians to the Hospital for Consumption at Brompton is, "*that cod-liver oil is productive of more good in the treatment of phthisis than any other agent yet employed.*" It appears also from the experiments that have been made in this hospital, that various kinds of the oil have been given without producing any marked difference in their curative effects. In private practice we have found it impossible to get our patients to swallow the darker kinds of oil, and for medicinal purposes there can be no doubt that the oil should be selected of a pale colour, with as little of a disagreeable taste and smell as possible. This will be of a pale straw colour, if obtained exactly as it was secreted, and in the same condition as it exists in the hepatic cells of the healthy liver of the cod-fish. The dark oil is procured from livers that are more or less putrefied; and to this cause, and to *roasting, in order to get more oil*, the disgusting taste and odour is due.

It would be out of place here to speculate at length on the exact way in which cod-liver oil produces a beneficial effect on the system in thoracic consumption. The researches of Simon have shown that in one case of phthisis in which the

* On the Use of the Pancreatic Juice. By J. C. Hall, M.D., *MEDICAL GAZETTE*, April 13th, 1849.

oil had been given, the fibrin was reduced below the normal proportion, and the albumen (which amounted to nearly thirteen per cent.), and other principles of the blood, increased very considerably. It is probable that cod-liver oil proves beneficial as a nutriment to all the textures. Not only is fat deposited in the adipose tissues, but the muscular powers are often increased most wonderfully by it; and the bloom of health which is seen upon the cheeks, and the change which sometimes takes place in the once white lips, now red, prove that, in some way or other, a change has been effected in the circulating fluid, and that the vessels contain healthy and nutritious blood. That these results follow the exhibition of cod-liver oil is certain; but even Dr. Williams, who has paid great attention to the subject, says, it is yet a question whether the oil "proves nutritious by direct conversion into albumen, or fibrin, or by preventing the waste of the albuminous principle by protecting it from the action of the oxygen absorbed in respiration." It is also thought that the oil itself may supply fat molecules,—requisites to healthy nutrition, as forming the nucleoli of the primary cells, or rudiments of tissues. This was first discovered by Dr. Ascher-son, of Berlin, and it is now admitted that fat does form the central portions of the elementary granules and cyto-blasts of textures, although the explanation of this writer, *that these cells are formed by the power which fat is said to possess of coagulating albumen* around it, is not so clear. Dr. Hughes Bennett has remarked,* in scrofulous diseases there is a want of fat, and that the albumen derived from the food in digestion is liable to be precipitated in an unorganisable condition (as tubercle, &c.) from the want of it. Dr. C. J. Williams says,† "that the chief salutary action of cod-liver oil is, not that it supplies fat where it is wanting, but that it supplies fat of a better kind, more fluid, more divisible, less prone to change, and more capable of being absorbed into, and of pervading the structures of the body: thus, affording a fine molecular base in the chyle, and therein a

material for a better plasma, and being conveyed into the blood, and distributed through capillaries and around deposits, by dissolving the crystalline and irregularly-concreted fat scattered through them, it renders them more amenable to the process of reparation and absorption." Hence its beneficial operations are more evident in those stages of tuberculous disease in which the deposits abound in fat, or where softening has taken place. It does not follow, however, that the change for the better can in such cases be of long duration; for both the lungs and the system generally are in all probability too deeply implicated in the mischief. Still for a time, even occasionally in the worst cases, the oil produces the most marvellous effects.

The indications of treatment, therefore, when thoracic consumption is established, are—1st. To subdue inflammation, whether occurring in the form of bronchitis, pleuritis, or peripneumonia; 2d. To support the strength by nourishing food and appropriate medicines,—to subdue irritation by narcotics, and to remove urgent symptoms of various kinds as they make their appearance. These it is not our intention to discuss in detail, as such considerations belong rather to systematic works on the practice of physic, than to bed-side sketches of the cases that have been under our care. The troublesome cough which wears out the patient, in the advanced stages of the disease, we have often seen much relieved by *aniseed*, which appears to have a singular power in allaying the irritation from which it arises. So great an authority as the late Dr. Prout has advised that three drachms of the aniseed should be bruised, that a pint of distilled water should then be added to the seeds at a temperature of 120°; this is to stand until cold, and to be used as a vehicle for hydrocyanic acid, or any other medicine you may wish to give. We have often seen its administration productive of much good, the cough becoming less frequent and violent. In the great majority of cases, towards the end of the disease, some preparation of opium will be the only remedy on which we can rely, both to soothe the cough and check the diarrhoea, which is always present. This often depends on ulceration of the intestines, and then it is very difficult to arrest. Catechu, tincture of opium, and the chalk mixture, full doses

* Bennett on the *Oleum Jecoris Aselli*, p. 58; also On the Structural Relation of Oil and Albumen in the Animal Economy, read before the Royal Society of Edinburgh, 1847.

† Principles of Medicine, 2d edition, p. 404, and On Cod-liver Oil in Phthisis. London Journal of Medicine, Jan. 1849, pp. 14-15.

of the tris-nitrate of bismuth, or a pill containing the one third of a grain of the sulphate of copper and one-quarter of a grain of opium, frequently prove serviceable, and the poor sufferer will often obtain rest at night by the injection of about two drachms of starch gruel with twenty drops of laudanum.

We had about two years ago as a patient a young lady who before her death from phthisis was harassed with constant nausea and vomiting, with pain and considerable tenderness over the epigastrium. Here the mucous membrane of the stomach was thinned and softened, and nothing gave much relief. Her distress was most mitigated by the application of a blister, and the administration of an effervescent mixture with hydrocyanic acid, and a few drops of the liquor opii.

We have not said anything of the administration of iodine in thoracic consumption. We have many times given the iodide of potassium internally, in the compound decoction of sarsaparilla; but the results have not been particularly satisfactory. If of use at all, it is only in the early stages of the disease, and in the absence of fever, inflammation, and a tendency to hæmoptysis.*

But whatever the remedies we may administer, and however beneficial we may consider them, every day attention must be given to those plans already pointed out as the best calculated for sustaining the strength of the body,—those hygienic measures by which the health of the constitution is ever best promoted; for the absorption and removal of tubercles from the body (and that tubercles are occasionally absorbed is now a fact placed beyond the possibility of doubt) will best be accomplished by a free and active circulation through and around the diseased portion of the lung, care being taken not to set up irritation in the part.

This being the case, the utility of regular exercise, — of friction and counter-irritation over the seat of the disease,—of daily washing the whole of the body with salt and water,—of the

free respiration of pure air,—of nutritious food,—must be evident, since it is for the most part by the oxidating current of arterial blood, which the more active circulation, resulting from an improved condition of the general health, directs to the vicinity of the tuberculous depositions, that their gradual absorption is accomplished.

Sheffield, May 1850.

[To be continued.]

ON THE TREATMENT OF WOMEN IN PROTRACTED LABOURS;

WITH REMARKS ON THE BENEFICIAL
EFFECTS OF OPIUM, AND THE
INJURY PRODUCED BY
CHLOROFORM.

By JOHN CRAIG,
Surgeon, Paisley.

For many years my attention has been anxiously devoted to the consideration and improvement of the practice of midwifery; and the evidence resulting from my experience sufficiently proved to me that by a scientific view of the various forms of labour, and by a systematic method of treatment, in accordance with the several necessities of each case, great improvement might be made. As the forms, then, of severe protracted, yet practicable labours, are various, the first consideration that should occupy the accoucheur's mind, when called to a woman in labour, is to weigh accurately the real nature of her case; and if it seem that probably the labour will be tedious and severe, then the means known to be suitable for the removal of the obstructing causes to delivery should be employed in a correct systematic manner, so that the apparent strongest cause of delay may be the first removed,—namely, if inflammation appear to be the most prominent obstructing cause, and fever and severe pain be also present, large doses of opium given in this state with a view to relieve severe but unproductive labour-pains, would be injurious until inflammation were first removed or greatly lessened; and in like manner must all other obstructing causes, respectively, be combated. Were such labours left to nature, as some advise, several days would be required for their completion.

The following are the few remarks I

* "Whether the iodine and alkali ever directly promote the solution or absorption of tuberculous matter, I am still in doubt. The iodide of iron I have found beneficial in cases of general weakness, but I have seen no reason to suppose that it promotes the removal of tubercles already formed."—Dr. C. J. B. Williams, Principles of Med. 3d ed. p. 402.

have to make on the varied views and modes of practice adopted by accoucheurs, which in many instances appear to be irreconcilable and inconsistent with the nature of the obstetric art.

The first paper I shall bring forward is one which was reported in the Dublin Quarterly Journal of Medical Science for May 1849, entitled "Objections to the Indiscriminate Administration of Anæsthetic Agents in Midwifery; by Dr. Montgomery, Professor of Midwifery." The first part of the observations made by the able author showed that he had paid great attention to the consideration of the impropriety of the "indiscriminate administration of anæsthetic agents in midwifery;" but at page 338 he says:—"I fully acknowledge its (chloroform) value and utility in obstetric operations, such as instrumental deliveries, turning a child in utero, or the removal of a retained placenta, and also in peculiar circumstances of natural labour independent of any operation." He also says—"He would give it in a case where the pain greatly exceeded its usual amount, and became intolerably severe; as well as in those cases occasionally to be met with in practice, in which a severe nervous pain is super-added to the ordinary pain of labour."

Now, with respect to the labours in which Dr. Montgomery admits he would in general administer chloroform, I unhesitatingly maintain, from some experience in similar and other severe and obstinate cases, as well as from the frequent injuries reported to have followed the administration of chloroform in midwifery practice, that the opiate mode of procedure, with its accessories consistently employed, in such forms of labour, will always be more successfully used than chloroform. It is true, fatal and injurious results from chloroform seldom take place in midwifery, in comparison to the number of cases so treated; yet, when *one* of these disastrous cases occurs, it is fair to inquire whether the practice should be persisted in when other and safer modes of treatment are open to the practitioner.

The subsequent remarks made by the Professor on the caution he considers necessary to be taken in the use of chloroform, even in operations, seem to me very appropriate, and go far to nullify everything he has said in its favour. Other views expressed and practised by Dr. Montgomery appear to me to have

a tendency to impede the advancement of obstetric improvement. After he has ably rejected the incorrectness of the inferences deduced from Dr. Simpson's scriptural quotations in proof of the correctness of his mode of practice, Dr. Montgomery goes on to say, when speaking of the severe pains of a woman in labour:—"I entirely agree with Dr. Denman, that labour is not a trick to be learned, but a regular process of the constitution; and that women may be assured that the best state of mind they can be in at the time of labour is that of submission to the necessities of their situation; and that they are under the peculiar care of Providence." At page 336, thirteen lines down, Dr. Montgomery again says:—"I feel persuaded that all other pains, and sickness, and suffering, are equally ordained of God, as the pains of labour, &c." Dr. Rambotham observes—"It appears to me that labour-pains (properly so called) were intended by the Great Creator for the wisest purposes; and he doubts, except in very rare instances, whether any attempt should be made to palliate them." Dr. Meigs, professor of midwifery, America, has said that labour-pains are of a physiological, not of a pathological nature; and Dr. Burns agrees in sentiment with Dr. Denman.

Now I trust it will be easily shown that these views held by accoucheurs, with a practice based on them for hundreds of years past, must have been the cause of many severe prolonged pains and fatal consequences to the parturient woman. The misapprehension of the Divine decree—namely, "In sorrow thou shalt bring forth children," as being synonymous with the usual phrase, "She is in severe prolonged labour,"—must have misled all accoucheurs up to the present period. That such a vague interpretation should in any age have been given to the Divine decree, so as to interfere with the duty of the accoucheur in the application of remedial means in order to relieve the pathological condition of the parturient woman, would seem incredible, it being the principal cause of her sufferings in all protracted labours. As a further proof of the difference of the meaning of the two terms used (sorrow and pain, or sickness), the latter of these in child-bed cases we can in a great measure mitigate at pleasure; whereas, in respect to the first, we cannot even miti-

gate: so that, whatever a few aspirants may attempt to impress on the ignorant mind for a few months or years, the fallacy must soon be apparent.

I shall now take the liberty of making a few remarks on the manner in which Dr. Murphy treats cases of accouchery by means of chloroform, as noticed in the *Monthly Journal of Medical Science*, Nov. 1849, Edinburgh. Almost all Dr. Murphy's reported cases were protracted or difficult, and were delivered by means of the use of chloroform and the application of the forceps; yet by the most careful consideration of his cases according to his own description of them, it did not appear to me that either chloroform or forceps should have been used, or were at all necessary or requisite; for in almost every instance the obstructions to delivery which occur in such forms of labours are readily obviated by other means, certainly more simple and safe, than forceps and chloroform; and to these means Dr. Murphy clearly and usefully hinted at in his late lectures, as reported in the *MEDICAL GAZETTE*. Dr. Murphy's long-protracted labours seemed to arise clearly from the want of those common means of relief necessary in such labours, or probably by the retardation which we are occasionally informed takes place from the administration of chloroform. After expressing his approbation of the employment of chloroform and the forceps in midwifery practice, he says—"All medicines will occasionally produce evil effects;" and he considers that the ill effects of anæsthesia merely come under this category. I can state, without fear of contradiction, that, on scientific and practical grounds, the ill effects of the mode of treatment about to be noticed will seldom or never be heard of, and, in all sincerity, it can never come under the same category of evils as that occasioned by chloroform. It is no doubt true—and a very remarkable truth it is—that all, or almost all, who incline to the practice of chloroform in midwifery cases are favourable to its continuance; and I shall simply takenote, in passing, of the apparently weak grounds which they have for their approval of a drug so doubtful and mysterious in its operation. It is, of course, equally easy for the chloroformist to maintain that chloroform is a safe and useful medicine, and should be employed, as it is for the opponent of chloroform to assert the contrary.

I shall next take the liberty to make a few remarks on some of the cases of midwifery reported to have been attended by Dr. Denham (see *Dublin Quarterly Journal*, August 1849, p. 107). Many of the Doctor's cases, like those of Dr. Murphy's, appear, from his own description of them, not to have indicated any necessity for the employment either of chloroform or forceps in order to effect delivery. It is true some of the labours were tedious; but in the forms of labour he describes, so far as I meet with them, their retarding causes to delivery are readily apprehended, and the various known curative means are easily applied, and, after their use, the labour is soon terminated, and both more speedily and less injuriously than by the use of chloroform and forceps. The Doctor states—"It is true, opiates often benefit such severe cases; but, to insure their effects, they must be given in large doses, when they generally produce a complete suspension of all uterine action perhaps for hours, while we can regulate the giving of chloroform so only as to allay the irritability of fibres, and quiet any unusual suffering, without interfering for any great length of time with the progress of the labour." So far as my experience goes, and I have attended midwifery practice for many years, and almost every form of protracted practicable labour has come under my care, I have also given laudanum freely in large doses to a great number of women in labour, and the greatest quantity given by me never produced a suspension of natural labour when it had really commenced; but I have been repeatedly sent for to cases where the woman was apparently in severe labour, and it was clear that the pains were spurious, and that some hours would be required before the natural parturient pains were likely to commence. Under such circumstances, on examination of the woman she will anxiously ask if she will soon be delivered: but the reply in such cases is, that the labour has not yet begun—that such pains will never expel the child; yet by the use of proper means the pains will either in a great measure cease, or on being greatly lessened the bearing pains will soon effect delivery. In this way many, seemingly, administer opium without ascertaining whether opium or a purgative should be first administered; and by this inappropriate mode of procedure

much evil is done. Such labours, when treated naturally, by the administration of the means indicated, terminate in a few hours in safety, and thus render unnecessary that mangled mode of procedure by chloroform and forceps, so often prejudicial to lying-in women.

We shall for a moment take a view of the mode of treatment according to Dr. Denham's view—the opiate treatment, in comparison with the advantages to be gained by the employment of chloroform. I think it is the Dr.'s tenth case, in which the pains were strong, but on the application of chloroform they were suspended; the chloroform was now left off: on return of the pains the chloroform was again administered, when again the pains subsided, and the woman was delivered by the forceps. This is a very extraordinary case, certainly, to bring forward in favour of the treatment which the author considers preferable to the natural and simple mode of practice by opiates and their necessary accompaniments. This case, as reported, seems one of the simple natural labours; yet by the deranged state produced on the expelling organs, it was necessary to employ instruments in the delivery.

In the thirteenth case, too, the labour was natural, and the child advancing; soon after the employment of chloroform the actions of the uterus became deranged, when chloroform was wisely relinquished—the woman had a tedious delivery. The forty-ninth case shows a tedious labour, apparently arising entirely from a state of things peremptorily demanding bleeding and the other usual means so generally effectual in relieving pain, and rendering the application of the forceps bearable, as well as to save sloughing of the soft parts. I hesitate not to admit that in my view Dr. Denham has given an account of his cases with great candour, as they appeared to him; but if the same kind of practice is carried on by others the improvement in practical midwifery will be long delayed. When Dr. Denham is making some remarks, I think on his fourteenth case, he admits that we are warranted to come to the conclusion that chloroform, if used, will prove injurious; and that the practice is a dangerous and tedious one. Apparently it is not so, but it appears that though the practice is attended with evil which

practice, yet he comes to the extraordinary conclusion, and says—"A review of the cases given will, I think, prove, even to the most sceptical, that chloroform is not only admissible, but highly beneficial, in forceps cases." That many will accede to Dr. Denham's views there can be little doubt, from the sincerity with which he gives his statements; but I shall only say, from my own conviction, that the treatment of women in childbed by chloroform will never be generally employed; and that in a few years it will be almost abandoned. Before leaving, Dr. Denham, in noticing his thirty-ninth and forty-second cases, intimates that a state of inertia sometimes occurs in the expelling organs; but, so far as I know, there is no such state natural to the uterus, and it only originates from an improper mode of treatment, especially in the neglect of removing the obstructing causes to delivery until the expelling powers of the uterus have become exhausted from unnecessarily long-continued, fruitless efforts to overcome a resistance which should have been removed many hours before by the accoucheur.

On the subject of opiates, and their auxiliaries for the removal of obstructions in protracted labours, Dr. Henry Bennet, in a manner somewhat similar to Dr. Denham, raises his voice in favour of chloroform in preference to the opiate method. The Dr. says he is favourable to the employment of chloroform in discriminate cases, and that he has resorted to it usefully in cases of irritation kept up by fear, &c., and where the parturient efforts were interfered with. The Dr. also states he had found chloroform a much better sedative in such cases than bleeding and opium, and that in no cases had he seen any ill effects fairly attributable to chloroform. This remark shall farther be noticed: in the meantime, it appears to me very objectionable that Dr. Bennet should have altered his opinion on the treatment of midwifery cases by opiates and bleeding in preference to that of chloroform, seeing that the cases he selects for its application are cases of irritation kept up by fear, &c., and where the parturient efforts were interfered with. From my experience but few such cases will come under the care of the accoucheur, and these will be more safely and expeditiously terminated by a more consistent plan of attendant auxiliaries,

than by chloroform. About the time Dr. Bennet related his case of death after childbirth, he stated "that he had seen no ill effects fairly attributable to chloroform in labour." Now, we have already noticed in this paper that accoucheurs and others do much ill by the misinterpretation of language, and one would think that Dr. Bennet, by his expression—namely, "that he had seen no ill effects fairly attributable to chloroform," may be considered in the same predicament as those already adverted to. It is, I believe, admitted by all, that in diseases of the chest, head, and heart, chloroform should not be administered, yet the Dr. seems to think himself sufficiently excused by saying, that the disease in his patient's heart was not known during life: but this should be no excuse whatever, one would think, for the approved manner of which he speaks of chloroform after he had inspected the dead body. It is evident that many parturient women may be in the same state, with the heart undiscoverably diseased, and the Dr., having seen the ill effects of chloroform in one case, should have dissuaded all from the use of it in childbed cases of this form of labour; for it is never necessary, and always must be hurtful.

If the opiate treatment were employed in the same inexplicable manner in which chloroformists administer their favourite drug, it would be equally as unsuccessful in its general and benign results; but when it is administered according to the well-ascertained nature of the various cases, and the other curatives employed which each particular symptom indicates, a failure in the result will be seldom complained of by its greatest opponents. It may be necessary, independently of the use of these means, to employ the forceps, not as we see it related in every twenty or thirty cases in addition with chloroform, but from incidental circumstances occurring in every two or three hundred cases, and even then from the soothed and relaxed state of the parts from other means, sloughing of the vagina, or laceration of the perineum, will not take place. Probably it may be generally thought, that had Dr. Bennet's case been treated by opium and bleeding, with the other necessities in general use in the improved mode of treating protracted yet practicable labour, his patient might have had a fairer road to life, than by

the administration of chloroform. The heart would have been relieved by the bleeding, and indeed the whole vascular system, and the frame generally, would have been composed by the opium.

It appears to me worthy of repeating, that in the *Lancet* for Dec. 29, 1849, Dr. Webster, in addition to his three former similar cases, gives a melancholy account of another one on which the effects of chloroform were so sudden that the patient remained long insensible. She had a painful and protracted labour, which terminated ultimately in a state of insanity.

I shall still make a few observations on a topic of a more useful description, yet it tends to delay that improvement of which the obstetric art is susceptible. In the *Lancet* for Dec. 1, 1849, Dr. Collins takes a very favourable and just view of the successful and skilful practice of Dr. Joseph Clarke. This view taken by Dr. Collins respecting the very successful practice of Dr. Clarke, appears very useful in one point of view—namely, in order to direct the attention of accoucheurs to the consideration of the nature of the cases which they undertake to conduct during labour, in that clear and skilful manner which rendered the practice of Dr. Clarke so, perhaps, unprecedentedly successful.

But still, having no difficulty of admitting the truth of all Dr. Collins has stated regarding the successful practice of his friend, yet I consider it was the great duty of Dr. Collins himself, in his day, to have promulgated, so far as his knowledge extends, the great improvement that has been enunciated respecting shortening the duration of labours; for no doubt can now remain that women in childbed, in every respect similar to those so successfully attended by Dr. Clarke, yet some of whose labours extended from thirty to seventy or eighty hours, may now, by the well-known appropriate means, be brought to a termination, at furthest, in fifteen hours, and generally sooner, and with equal safety both to the mother and the child.*

In the *MEDICAL GAZETTE* for Nov. 23, 1849, page 902, a paper is inserted, said to have been reported by Dr. C. W. Lever, On the Use and Advantages of Opium in the Practice of Obstetrics.

* Mr. Craig no doubt means that "the labours" may be brought to a termination, and not "women in childbed;" yet his language implies the contrary. Practical men should use shorter sentences, and take more care in committing their views to paper.

The lucid, concise, truthful, and very useful observations thus noticed should be fixed on the mind of every accoucheur. Dr. Lever commences his observations with abortions, and ends them with uterine hæmorrhage, and his paper altogether embodies a mass of truthful and valuable information.

These few observations of Dr. Lever's, so far as they go, are admirable, and form the only foundation at present known on which a work on an extensive scale may be based as a safe guide to the obstetrician. Unless a practitioner has a well-grounded knowledge of the nature of the obstructing causes, he cannot apply a remedy. But this is not all: it is absolutely necessary, in order to insure success, both to ascertain the kind and the quantity of the remedial means to be administered to each parturient woman, whatever may be the nature of her case; for although there are but few particular forms of labour, yet each form must be known, so as to be successfully treated. There are many practitioners who, by the use of the same kind of means adapted for successful treatment, do much injury to the patient by administering too large doses, and others give too small and too few doses, which are quite inefficient for the end intended. In this unskilful mode of procedure the patient is not treated, but may be said to be left, and that with injury, to chance.

*** We have been obliged to erase many passages from this paper, owing to their being utterly unintelligible. We would advise the writer in future communications to keep strictly to his subject, to avoid the plan of converting his sentences into lengthy paragraphs; and when he differs from others, to differ with courtesy, and not treat obstetricians generally as conspirators against the peace and comfort of womankind. Mr. Craig has a fair claim to be heard, as a practical man, but he wants the conciseness and precision of most practical writers. We trust he will take these remarks in good part, as our desire is that he should render the publication of his experience useful to the profession by an improvement of his style.

BRIEF NOTES ON THE DISEASE, INDIAN VILLAGE CHOLERA.

BY ASSISTANT-SURGEON MOORE, B.A.
Gwalior Contingent.

[Continued from p. 713.]

PART III.

Treatment.—The conflicting opinions which exist amongst professional men as to the course to be pursued in the treatment of cholera, need not be quoted at length in brief notes such as these: they would be out of place here; the advantages to be derived would not compensate for the time and labour bestowed. Suffice it to state, that bleeding has its advocates and its opponents. Calomel is lauded by one, and condemned by another. Opium, in a variety of forms, is regarded by one class of practitioners as their trusty sheet anchor; by others, opium in every shape is hooted at, and scouted, and pronounced worse than useless. Combinations of these medicines—calomel and opium, sugar of lead and opium, croton oil and opium, arsenic, arsenic and opium, hot and cold injections, stimulants in solid and liquid form, transfusion, each and all have their advocates. The infinitesimal doses of homœopathic and isopathic medicines have proved miraculously successful in the cure of cholera,—successful even beyond the most sanguine expectations of those who practise on the credulity of the public with such therapeutic delusions. Scalding hot water, and red-hot pokers, are not without admiring advocates. Surpassing every medicine hitherto prescribed in the infallibility of their specific virtues, anæsthetic agents, ether and chloroform inhalations, have been brought prominently to the notice of the public.

The drenching of the patient's inside with ice-water,—with ice in lumps,—and with ice sugared and pounded; the souping of his outside in water of high and low temperature; the mummifying of his body in sheets wet, and sheets dry, and sheets medicated,—are remedial measures also strenuously advocated.

In this catalogue of anti-cholera specifics, upon which shall we fix as the life-preserving remedy?

When the Indian village cholera rages as an epidemic,—when that state of the atmosphere prevails which predisposes to an attack of the mucous membranes of the intestines, in preference to any other structures in the body,—when the disease is localized, and sweeps away its victims in the course of a few hours' illness,—the first indication of the attack must be closely watched, and vigorously combated. To ensure success, and to secure to the patient the chance of recovery, the remedial agents, whatever they be, must be employed in the earlier stages of the disease.

Medicines and remedial measures which fail in restoring vigour to the system in the third stage of cholera, nevertheless may be attended with the happiest results if resorted to at an earlier period. Success is rendered still more probable if they be persevered in with diligence and with confidence.

There is no disease in which hesitation in practice,—in which a shifting, unsettled principle of medical treatment,—in which a system of tampering with the symptoms by newly-discovered specifics, is more likely to be attended with fatal consequences than in this. There is no disease which admits less of delay in its treatment. If by possibility it can be done, intercept by prompt and decisive measures the march of the disease from the first and second stages to its third or advanced stage. However trifling the symptoms may be at first, this is the object to be kept steadily in view. In this lies the secret of success in the treatment of cholera.

What practitioner, then, with the slightest pretensions to skill, and judgment, and decision in practice, will tamper with the lives of his patients, by deferring active measures of treatment until the symptoms unequivocally declare that the disease has progressed to its third stage? He who promptly brings his remedial measures and therapeutic agents to bear upon cholera in its earlier stages will be able to exhibit a list of cases successfully treated, more numerous, and more satisfactory, than the practitioner who flies from one new specific to another, and thus coquets with the disease, until the symptoms speak forth in stern language, that the hours of his patient are numbered. His efforts to invigorate a system from

which life is fast ebbing, must prove abortive. To his vacillation in practice must be attributed the loss of the main chance in arresting the onward progress of the disease.

These truisms, simple though they be, cannot be dwelt upon with too strong an emphasis. They cannot be impressed too deeply on the minds of medical men lately arrived in India, who cannot have had practical experience, on an extensive scale, of this scourge of the human race in this country. They cannot be placed too prominently, nor too frequently, before the eye of the public. The safety of human life depends in no small degree upon their observance.

The use of the lancet.—The first measure in the course of treatment which calls for notice is general bleeding. Should the cholera patient be seen immediately after the first evacuation of rice-water fluid from the stomach, and of rice-water fluid from the bowels, the question of venesection demands from the practitioner his earnest attention. From the use of the lancet much good or much evil may accrue to the patient.

Its indiscriminate employment in all cases, and under all circumstances, by some practitioners, has brought venesection in cholera into disrepute. This was the error into which Annesley fell. In the majority of cases treated by him, Annesley practised bleeding with success; and in consequence of such success he has recommended venesection to be employed at all times, and under all circumstances. Open a vein, and let the blood trickle, if it should not flow, until the colour changes from black to red. This was his rule.

Twining, in like manner, practised general bleeding in cholera with success, and has recommended its use. Venesection, in his practice, was not employed without discrimination. He restricted the use of the lancet to certain states of the patient, indicated by the presence of particular symptoms. The authority of such men as Sir James Annesley and Dr. Twining, as to the value of the lancet in the treatment of cholera, cannot be questioned. Their opinions were deduced from the accumulated experience of years, and as such they have placed them on record.

The practice of bloodletting in cholera must be regulated by the pulse and constitution of the patient, as well as

by the stage of the disease. It is useless to lay down stringent rules for the guidance of the profession, as to when the lancet ought to be employed, and as to when the lancet ought not to be used. The medical man, at the patient's bed-side, can alone decide whether general bleeding would prove injurious or beneficial. Upon his judgment, based on experience, must rest the responsibility of prescribing or withholding the lancet.

Venesection, when prescribed by me in the treatment of cholera, has not realised the expectations entertained of its utility. This was particularly the case when employed in the second and not in the first stage of the disease. In the third stage, the opening of a vein for the purpose of abstracting blood has positively hastened the patient's death. The use of the lancet will prove injurious, if, with the cessation of the pulse at the wrist, the impulse of the heart cannot be felt when the patient inclines to the left side. Its use is also contra-indicated, if, with the cessation of the pulse at the wrist, the action and muscular sound of the heart are indistinct, or with difficulty can be heard in the cardiac region; but the use of the lancet may not prove injurious should the impulse and action of the heart remain strong and vigorous, even after the pulse has ceased to beat at the wrist.

In importance, the use of the lancet is secondary to the rapid and extensive abstraction of blood from the surface of the abdomen. How can this object be attained? Upon what principles of treatment should this local abstraction of blood be recommended?

The symptoms and pathology of the disease have declared, in unequivocal terms, that from the internal surface of the stomach and intestinal canal a sero-mucous flooding is in active operation. Of this there cannot be the slightest doubt, unless we discredit our senses. The object to be gained by treatment, if there be any, must be to correct and to control that morbid state of the membranes and tissues which throws off this viscid, tenacious, gluey, or thin, gum-like secretion, as a necessary consequence of its deranged condition. The object of treatment must be, to strike at once at the root of the mischief, to make a quick and decided impression upon the fretted, and irritable,

and sero-mucous eliminating structures of the stomach and small intestines, by the local abstraction of blood frequently repeated.

Effect that impression, and the membranes will cease to secrete. Medicines administered internally may then produce some effect upon the system. The whole contents of the intestinal canal, from the stomach to the rectum, may be swept away by drastic purgatives, or by stimulating injections; or they may be retained under the paralyzing influence of narcotic and astringent drugs, but the disease will not be subdued. The membranes will not cease to secrete the less. Within an hour's time the intestinal tube will be reloaded with the same viscid, tenacious, gluey, inspissated mucus; or with the same thin, gum-like, rice-water fluid as before. Other than this it cannot be. These secretions, the products of the disorganised state of the mucous membranes, and of the subjacent tissues, endowed with vitality, will continue to be eliminated until remedial measures and therapeutic agents are brought to bear on the cause and not on the effect—upon the seat of the disease itself, and not upon the mere products of that disease.

The use of cupping.—To effect this quick and decided impression upon the fretted, and irritable, and sero-mucous eliminating condition of the mucous membrane and subjacent tissues of the stomach and intestines, by the rapid and extensive abstraction of blood from the locality of the disease, cupping is the remedial measure worthy of confidence. Cupping has done its duty well, and effectually in many cases: it will do its duty well and effectually again whenever it may be called into requisition; it has aided in a material degree the operation of medicines administered internally.

This mode of local depletion is preferable to the application of leeches. In applying leeches there is an unnecessary waste of time; there is also an unnecessary degree of worry caused to the patient. The drain of blood from the system may be sufficient, but leeches fail in producing that which is most required—a quick and decided impression on the irritable, the sero-mucous eliminating surface of the stomach and bowels.

With three cupping-glasses—one applied at the epigastrium, another to the

right, and the third to the left of the umbilicus—from fifteen to twenty ounces of blood can be abstracted in less than ten minutes by an expert cupper. In eight or ten hours afterwards, if the impression made on the deranged condition of the stomach and intestines prove unsatisfactory, in not having diminished the quantity, and in not having arrested the frequency of these sero-mucous discharges, the cupping must be repeated, and an equal or a less quantity of blood abstracted. Under no circumstances should the cupping instrument give way to the lancet. In the earlier stages of cholera, whilst the pulse at the wrist is full and bounding, and throbbing, the lancet may be used first—the cupping instrument soon after. The symptoms which contra-indicate the abstraction of blood by venesection do not contra-indicate the local abstraction of blood by cupping. In the last stage of cholera, when the patient is in the jaws of death, cupping has shared the fate of all other remedial measures: its failure, however, is no valid objection against farther trial, even in the last stage.

Thus much with regard to cupping. Whenever and wherever blood is attracted to an organ, to a membrane, or to any description of structure in the human body, by the fretted and irritable state of the invisible nervous filaments,—whenever, in consequence of this attraction, the capillary net-work of vessels becomes injected with blood, and gorged beyond the power inherent in their coats to retain the fluid,—whenever lymph and serum, the saline ingredients or the red particles of the blood, percolate through the capillaries, and become extravasated, and the sub-mucous glands secrete in excess,—in a word, whenever and wherever that morbid state prevails, known to pathological anatomists as local inflammation,—a practitioner will seldom err in covering the seat of inflammatory action with cupping-glasses.

Cupping externally, and the administration of lunar caustic internally, after the first discharge of rice-water or sero-mucous fluid from the stomach or from the bowels, have cut the attack of cholera short at once: it mattered not how virulent the type of the epidemic might have been at the time. Cupping externally, combined with lunar caustic internally, in regulated doses, has inter-

cepted the progress of cholera in its march from the second to the third stage. In the last stage, the elimination of serum, mucus, and lymph from the internal surface of the stomach and intestinal canal have been checked by cupping externally, and lunar caustic internally; and, in consequence, life has been prolonged for hours beyond the time noted in cases otherwise treated.

Within the reach of medical men there are not two such powerful remedial agents to arrest the secretions, on the one hand, and to subdue the inflammatory action, on the other, as the local abstraction of blood from the surface of the abdomen, by cupping externally, and the administration of lunar caustic internally in regulated doses. The value of these remedial agents has been proved in the acute, subacute, and chronic stages of dysentery and of diarrhoea, as well as in the acutest form of the Indian village cholera.

The use of lunar caustic.—That which baffles the physician's skill and medical treatment in cholera, is the fearful rapidity with which the powers of life sink. In the present state of medical science there is not a single medicine known through the instrumentality of which the relative proportions between the serum and the crassamentum of the blood can be immediately restored. Were such a medicine in the possession of the faculty, the cholera difficulty, or the resuscitation of life in the collapsed stage, would be at an end: the problem would be solved.

In the absence of that miraculous agent, the preparation which can be employed with certainty in checking the extensive and excessive effusion, exudation, filtration, or percolation of lymph and of the serous particles of the blood from the circulatory system into the cavity of the stomach and intestinal tube, is the medicine to which attention should be directed.

From the unerring action exercised over the inflamed and otherwise morbidly deranged mucous membranes, lunar caustic is the therapeutic agent upon which reliance can be placed to arrest the progress of cholera in its earlier stages. Lunar caustic is the preparation which exercises an immediate, direct, and positive control over the serum-effusing, lymph-exuding, and mucus-secreting action which has arisen

in the membranes and tissues and glandular bodies of the stomach and intestinal canal. Lunar caustic is the therapeutic agent which, when brought into immediate contact with the injected capillary network of vessels,—with the tumid and vascular and villous surface of the mucous membrane,—with the fretted, and irritable, and sero-mucous eliminating submucous tissues and glandular bodies,—arrests the secretions, cuts away the adherent layer of thick, glairy, gelatinous mucus, and effects an instantaneous change in the morbid action of the structures of the intestinal tube.

In whatever stage of cholera lunar caustic be administered internally, the effects produced on the irritated, inflamed, and secreting tissues, by direct contact, are the same. So long as the tissues are endued with vitality, the changes produced by the direct application of lunar caustic to the irritated and inflamed mucous surface are invariable and unvarying. In this, then, consists the matchless value of lunar caustic—that it never fails in its action,—that in its active operations it is the safest and speediest remedial agent in controlling and effecting a change in the morbid condition of every structure, of every tissue, and of every secreting glandular body with which it comes in contact during its passage from the stomach to the rectum.

Beyond this the value of lunar caustic does not extend. Lunar caustic will not re-invigorate a system in which life is almost extinct. Nor will lunar caustic infuse fresh blood into the arteries and veins and capillaries through which have oozed out into the stomach and intestines all the ingredients, save the red particles of the patient's blood. Nor will lunar caustic disperse in the parenchymatous tissues of the lungs, the liver, or the brain, the stagnation of the devitalized blood feebly propelled by the heart's contractions.

Search the Pharmacopœia: there is not a preparation which will bear comparison with lunar caustic when the object to be gained is to arrest the morbid secretions from a mucous surface. In this, then, the control exercised by it is direct and positive.

[To be continued.]

ON THE

DIFFERENCE OF THE WHITE AND GREY MATTERS OF THE BRAIN IN DISEASE.

BY JOSEPH SWAN.

It has been stated that the grey and white matters of the brain have different conducting powers in health; also that the grey has high exciting powers; and it is therefore presumed that in disease it would be liable to such changes as produce the most active and exalted influence; and that the white, which possessed higher conducting powers, but lower exciting qualities, would be subjected to changes tending to the production of a lower influence: but, although the grey is more liable to exalted changes, it is not improbable that its lower conducting power may tend to prevent the communication of disease from one part to another so readily as it would have done if it had not had the molecular structure; and, on the contrary, the less interrupted condition of the white may favour the continuation of the disease when it has once begun, although its access was more protracted by the lower power. The continuations of the membranes are favourable for its propagation, especially in the grey. These capabilities are, however, much varied by the difference in the supply of blood.

The grey and white matters are furnished with membranes, which have peculiar vessels, as each of them requires a particular and appropriate supply of blood: but modifications in this respect are produced by an increased quantity distributed by the arteries, and by its unusual delay in the veins; by its exciting quality, from the preponderance of nutrition and high degree of oxygenisation, or by its more enfeebling dilute condition from deficient nourishment, or from its want of a due influence of oxygen. The increased quantity or higher quality may produce only a slight temporary excitement, but, by its continuance, may very gradually change the structure and functions of more or less of the brain, and induce a thickening of the membranes, suppuration, or an effusion of serous fluid into the meshes. In this

manner the delicate structures may be compressed, and their functions more or less interfered with, according to the degree and extent of the implication. There may be an impaired condition of the membranes, and a diminution of the grey and white matters, and, along with these changes, more or less dilatation of the veins favouring permanent venous congestion.

As one structure is highly vascular and freely supplied with blood, the other much less vascular and admitting principally the colourless parts,—as the one has a very vascular membrane, and the other an analogous but much less vascular membrane,—in disease the first will be liable to great excitement, and the ulterior consequences of active inflammation; the second will have a tendency to effusion of fluid, to debility and paralysis; and this is particularly exemplified by the optic nerve, which is so much depending on white matter at its origin and continuation in the optic tract and commissure, and whose functions are so seldom restored when the tracts or the surface in the ventricles have been much disordered either originally or from their contiguity to the membranes in which an inflammatory action has been set up. It is also exemplified by the slow and imperfect recovery from paralysis when the white tracts have been long or very seriously affected by chronic inflammation or injury. The olfactory nerve, on the contrary, is seldom paralysed; nor does the grey matter on the surface of the brain so easily become powerless. When the grey matter and pia mater are affected by inflammation, it may be on some more rare occasions speedily communicated to the white tracts and their membranes. This effect may be very quickly removed, along with the inflammation of the grey matter and its investing membrane which imparted it, by copious depletion; but when the tracts have become affected from chronic inflammation, or from distraction by effused blood, or from a large secretion of serous fluid into the meshes, the paralysis may be more permanently established. In insanity the mind is affected from the excitement of the pia mater and grey matter; but when the disease has reached the white tracts, paralysis may eventually ensue, and there will then be both mental and corporeal infirmity. When the chronic

inflammation has long affected the membranes, and has subsided, thickening will continue, and, as they become unable to nourish the parts they invest in the same manner as previously, the paralysis will remain.

When it is considered that such countless numbers of grey particles are present in the human brain, it is probable that small parcels of them may be affected by disease; and as nearly the whole of the grey matter is liable every moment to excitement from the mental faculties, as well as from corporeal conditions and exercises, and especially from the variations of the actions of the heart and other influential organs, it is not unreasonable to suppose that some of them may be disordered more frequently than is presumed to be the case generally. Any gradual increase of action in them may produce headache, or partial pains, or some general discomfort; and when they are more largely implicated, their serious disorder may be only noticed by an aberration or failure of the mental faculties, or of the powers of the centres, or of the nerves of the special senses, or of those of common sensation and volition.

Diseases of the brain have proved very unmanageable, probably from the difference of the structures composing it; for as one has high vascular powers, and the other much lower ones, the remedies suitable for subduing one may depress in too great a degree the other; so that whilst they are restoring one to health they are incapacitating the other for its ordinary functions. Nevertheless, as the disease is very much confined in many instances to the more active parts, so by care many injurious effects of remedies on the parts having lower powers may be avoided.

Although the grey matter takes so large a share in the production of sensorial power, yet when it is disordered it may be more easily restored than the white; for although, when extensively diseased or injured, it is liable to produce speedy death, yet when it is less largely implicated, and only by a chronic form of disorder, it may not permanently suffer; or, if affected to only a small extent, it may not implicate so much of the white communicating with it as to impede very important functions, and has gradually implicated tracts. But when it has not yielded to large tracts of white matter, and para-

lysis has ensued, the recovery becomes extremely doubtful.

As it is probable that the sensory is contained principally in the grey matter of the convolutions, and is made ready for activity by a very vascular membrane, and as it is probable that in by far the most numerous disorders of the brain, and especially those implicating the intellect, these are the parts principally affected, they may, according to their high powers, prove amenable to medical treatment. It is probable that the white matter, and the membrane investing it, from their lower powers are not at first much implicated in these disorders, but only when, from the violence of the excitement of the pia mater and grey matter, the irritation has been forcibly communicated to them; and afterwards only from the continued influence of chronic inflammation. As the white matter is probably less amenable to remedies on account of its lower activity, and as it is not often primarily affected, so a larger scope is allowed for expecting the ultimate recovery from insanity, as it depends upon the structures having the highest powers.

6, Tavistock Square, May 1st, 1850.

ERYSIPELAS.—DR. REESE'S NOTES OF HOSPITAL PRACTICE.

DURING every winter, and at times when an unusual amount of humidity prevails, there has been, in the surgical wards, and sometimes simultaneously in every part of the hospital, a marked tendency to erysipelas inflammation; so that occasionally it may be said to approach an epidemic form. It has, then, been deemed expedient to collect all the cases scattered over the house into one or more wards, rather for the facility of their treatment than from any dread of contagion. Ice and iced water have been found to be invaluable as a local application, and this when the free application of nitrate of silver, iodine, and blisters, failed to arrest the inflammation, or prevent its spreading. The constitutional treatment has been chiefly quinine, wine, &c., under which a majority of our patients recovered. In phlegmonous erysipelas, numerous and extensive scarifications, allowing of the free escape of the pus, together with moderate but unremitting pressure by rollers, have proved signally successful in many formidable cases; appropriate constitutional treatment, to support vitality, having been steadily persevered in throughout.—*Dr. Reese, in American J—*

MEDICAL GAZETTE.

FRIDAY, MAY 24, 1850.

THE subject of the legal prohibition of the sale of poisons, involves more difficulty than may at first sight appear. No one can doubt the propriety or even the necessity of some such measure becoming the law of the land with as little delay as possible; but unless the clauses of a prohibitory act be clearly and distinctly worded, one of two consequences must follow,—either the provisions of the law will be readily evaded, or there will be an undue interference with the right of trading on the part of manufacturers and druggists; as well as with those occupations in which certain noxious substances are innocently made an object of sale or use. That secret assassination by poison will ever be entirely prevented by any penal legislative measure, is no more probable than that burglary or any other crime will be similarly prevented. There is, however, a universal, and, we believe, a well-founded conviction throughout the country, that the facilities of obtaining poison are too great, and that poisons are too readily procured under false pretences, and are too frequently put to an unlawful use. Here, then, there is fair ground for legislative interference; and we have only to see that this is efficient, and that it does not fall short of, or go beyond, the actual necessity of the case.

Although prohibitory laws of this kind have existed in France for nearly two centuries, no English minister until the present time appears to have considered the restriction of the sale of poisons as a subject calling for special legislation. The attention of the French Government was strongly directed to the necessity of enacting a prohibitory

law, by the revelations brought out on the trial of the Marchioness of Brinvilliers. This notorious criminal, who was decapitated and burnt on the Place de Grève, on the 17th July, 1676, had practised with impunity a system of secret murder unparalleled in history; and with the desire of putting a stop to crimes which had spread a panic through society, Louis XIV. issued, in 1682, a special edict for the punishment of witchcraft, sorcery, and poisoning. A mysterious terror was spread over these terrible acts of secret murder, which not unnaturally led the credulous portion of the public to associate the act of the *poisoner* with witchcraft and sorcery. The prediction of death was not difficult in the hands of cunning persons, who had made themselves acquainted with the properties of poisons, and the secret methods by which they might be administered, unknown to the intended victims. This sweeping edict, while it expelled from the kingdom impostors of all kinds, assigned the punishment of death to those who were convicted of employing poison with criminal intention, whether death did or did not follow the act of administration. All accessaries to the knowledge of the preparation or use of poison, were bound to communicate this knowledge to the judicial authorities, under the pain of severe punishment.

The edict went further into detail, and attempted to solve that which is now even a difficulty to all who have given attention to this subject. What is to be understood by a *poison*? How can we prohibit the sale of that which cannot be defined? The Government of Louis XIV. furnished a short answer to these questions, by treating as poisons not only substances which occasion speedy death, but also those which by slowly affecting health give rise to disease: hence all persons, even members of the medical profession, were prohi-

bited, on pain of death, from keeping "substances, whether natural or artificial, which, having the properties of a poison, and not forming part of any ordinary compound, can only do mischief, and are of a noxious and mortal nature." The sale of arsenic, orpiment, and corrosive sublimate, being substances used in daily life, was permitted under certain very stringent regulations, the disregard of which entailed a penalty of from 1000 to 3000 francs. These and other mineral poisons were not, however, allowed to be sold in a pure state to any person whomsoever, or under any pretence whatever: they could be sold only as compounds (*i. e.* mixed with other substances); but then the compounds were to be prepared by the druggist himself, or by an assistant in his presence.

The edict of Louis XIV. was the sole restricting law on the sale of poisons in France until the commencement of the present century. A declaratory law was passed on the 21 Germinal an XI. (April 1803), extending the provisions of the old edict to all poisonous substances whatever; but some legal difficulty having arisen on the construction of this law, as to what substances were really included among mineral poisons, a list of the prohibited articles was published in the following year. This list included the nitric, sulphuric, and muriatic acids; oxide and sulphurets of arsenic; oxide of bismuth; tartar emetic; vitreous oxide and sulphuret of antimony; oxide of mercury; corrosive sublimate; sulphate of zinc; oxides of lead and copper; acetate and sulphate of copper; nitrate of silver and caustic potash. These regulations again underwent revision in 1846, as they were considered to be quite unfitted for the advanced state of science and commerce; and a report was presented to the government by M. CUNIN GRIDAINE, Minister of Agriculture and

Trade. The following are the principal features of this report, based as it was upon the best scientific and commercial evidence which could be procured.

The great increase of the crime of poisoning was ascribed to the want of a legal nomenclature of poisonous substances, and to the freedom with which, in spite of the law, poisons were sold for the dressing of corn, the destruction of vermin, and the treatment of domestic animals. The enforcement of the law was found to be attended with great difficulty. Some substances regarded as poisons were absolutely necessary in certain trades, and no substitute for them could be found. Others were so easily procured, and cost so little, that they were to be found in every household. Hence it appeared to be neither expedient nor practicable to prohibit entirely the sale of such substances. M. GRIDAINE came to the conclusion, from the evidence before him, that an absolute prohibition of the sale of poisons was an impossibility, and that all that could be reasonably enforced by legislation, was—1st, that restrictions should be placed on the sale of *arsenic* generally, and that the employment of this substance for certain purposes should be altogether prohibited; 2d, that special regulations should be made on the sale and purchase of a certain number of other poisonous substances, of which a list should be attached to the legal ordinance.

The following remarks were made on the use of *arsenic* in agriculture; and they are of especial importance at the present time in this country, because, beyond all doubt, many of the cases of arsenical poisoning which have excited great public notoriety within the last few years, have been traceable to this source. The poison has been procured innocently, but as it was procured in large quantities, and was accessible to

all classes of farm-labourers, it has readily found its way into the hands of a criminal desirous of employing it for the purpose of murder.

Arsenious acid, it is stated in the report, was extensively used in certain agricultural districts of France, either with the object of destroying the spores of those microscopical vegetables which produce rust or smut in corn, or for the purpose of poisoning certain animalcula (vibriones) which, when they exist in seed-corn, may lead to the destruction of the crop. All the evidence yet procured tends to show that while the sale of arsenic for this purpose renders the poison most readily accessible to the murderer, its beneficial effects on the corn are open to great doubt. It may, it is true, destroy the insects and animalcula which infest seed-corn, but it has no effect whatever in destroying smut or preventing the occurrence of *wredé*: on the other hand, it has been satisfactorily demonstrated that a solution of sulphate of copper, or a mixture of lime and sulphate of soda, will equally destroy the vegetable and animal microscopic organisms which are found in seed-corn, and favour vegetation, while the lives of persons are exposed to no risk by the employment of these substances. It is, therefore, recommended that the use of arsenic for dressing seed-corn be strictly and entirely prohibited.

No good substitute for arsenic in the destruction of vermin has yet been found: and until this desirable end were attained, the Committee recommended that the sale of arsenic in its pure or natural state alone should be prohibited. Any arsenical preparation sold for this purpose should be of such a nature as to render a mistake difficult, if not impossible; and by its consistency, odour, taste, and colour, it should serve to detect or prevent any criminal attempt. This compound should be prepared under the superintendence of the Royal College

of Pharmacy, and none but licensed druggists should be permitted to sell it. The formula of the compound should be inserted in the Codex. Similar precautions might be adopted with respect to the sale of arsenical preparations required for killing the fly in sheep, or for the medical treatment of domestic animals generally.

Such is the substance of the French Report. On the 29th October, 1846, a Royal ordonnance was issued in conformity to the suggestions contained in it. As we are now on the eve of legislation in reference to this subject, it may be as well to profit by the experience, as well as by any omissions in the restrictive precautions adopted by our neighbours; and for this purpose we propose in another number to give an outline of the French law, with a list of the substances ranked as poisons, and of which the sale is prohibited in France. Sir G. GREY has objected to the publication of a list of prohibited substances in the English bill; but, admitting the difficulty of making such a list, it appears to us that the leaving of the question open, will render any law inoperative. At any rate, a magistrate will have to consider, whenever an information is laid before him, what is to be understood by a "poison or destructive thing;" and until this be settled, with respect to a great number of substances, no conviction can take place. Then, it may be expected that conflicting decisions will be made by different magistrates, according to the evidence laid before them. Whatever difficulty may exist in constructing a list of poisons, we think it would be advisable that we should, in this respect, imitate the example of the French, and not convert a magistrate's court into an arena for casuistical disquisitions on the poisonous or non-poisonous nature of the substance sold. Such, however, it appears to us, must be the inevitable result of the non-publication of a list of

prohibited articles. We shall take an early opportunity of returning to this subject.

CAUSES OF HÆMORRHAGE FROM THE UMBILICUS. BY DR. BOWDITCH.

DR. BOWDITCH, from his researches, thinks that there are five classes of hæmorrhage from the umbilicus:—

1st. A bleeding occurs soon after labour. This is generally owing either to insufficient care in applying the ligature to the cord, or to a contraction of the cord, which, at the time of being tied, is large: and the fluids subsequently exuding allow a relaxation of the ligature. This, if noticed early, can be easily restrained by a new string.

2d. I find one case recorded by Dr. Hill (LOND. MED. GAZ., from *Dublin Med. Press*, vol. lii. p. 556), in which great hæmorrhage occurred, in consequence of a practitioner having forcibly removed the cord, from fear that erysipelas would ensue if it were allowed to remain. It is to be hoped that few cases of this kind will ever occur.

3d. There is another, of which we have alluded to one specimen, given in Dr. Jackson's notes of a case treated by Dr. Hayward. The bleeding began on the third day from the removal of the cord, and notwithstanding every effort, death occurred in twenty-four hours. In this case there was probably an imperfect closure of the vessels from non-coagulation of the blood.

4th. The largest class of serious bleeding is like those reported by me. In these the funis drops off, and usually nothing abnormal is observed, or at most only a delicate sponginess in the umbilicus. After three or four days an oozing commences, which either increases with every application, or, perhaps, is slightly checked by astringents, &c.; but it almost always proves fatal, and the patients before death become perfectly blanched. In these cases it is very common to observe an alteration in the functions and structure of the liver; the dejections being non-bilious, and at the post-mortem examinations disease of the hepatic structure, or of the ducts, being observed.

5th. Finally, we have the really hereditary hæmorrhagic tendency. The blood in these cases oozes from the gums, intestines, under the skin, &c. There are few cases on record of this class in new-born children, unless we consider our own cases, and the class of hæmorrhage described as our fourth species, to be such; but there are numerous examples of it among adults, in whom, however, the navel seems to have healed perfectly soon after birth.—*American Journal of Medical Sciences*, Jan. 1850.

Reviews.

Evening Thoughts. By a PHYSICIAN.
8vo. pp. 144. London: J. Van Voorst.
1850.

THIS little work is highly creditable to the author. Who the Physician is does not appear: we hope there are many such in the profession, and that, like the anonymous author of this work, they may have it in their power to communicate their thoughts in as clear and instructive a manner for the benefit of the public and profession. We have seldom read a collection of essays on metaphysical and moral subjects better calculated than these to improve the understanding. The language of the author is lucid: there is throughout a careful avoidance of the jargon of the schools, and a constant appeal to reason, so that even those who would commonly be repelled by the name of metaphysics will find in this volume an instructive and interesting companion.

The essays are short, and, for the most part, of a desultory character: they involve many subjects connected with mental and moral philosophy. We recommend this book as a complete antidote to materialism. In the first essay, "On the Whole Mind," the author thus refutes the doctrine of Locke that the mind is a product of the senses:—

"If the mind were the mere product of the senses, it could have no thoughts, aspirations, or wishes, which the senses have not furnished. It could not rise above its origin. If it sprang from the impressions of this world it must be of this world. But the reflective man knows he has types within him infinitely above those which the outer world could have fashioned; that he has a prototype of the true, of the just, of the good, in his own soul, such as neither his own actions, nor the deeds of mankind, could have supplied him with. For whence, in this imperfect world, or in his own conduct, could he have derived the pattern of absolute truth, complete goodness, perfect justice, with which he measures the acts of others and of himself, and feels theirs and his deficiencies? Whence did he derive that ideal of happiness which nothing on earth satisfies? If this shifting changing scene, where death is ever present and mutability is the law; if this outward material world of vicissitude, produced the

mind, whence could be derived that profound impression of immortality which has been congenial to the human soul at all times and in all nations?"—p. 5.

Having shown what it is *not*, he proceeds to tell us what it is:—

"The theory, therefore, which explains most completely and satisfactorily the facts of our own consciousness, is that the mind is a spiritual being enclosed in a material and living organization, and that, for the education of the mind in this state of being, the impressions on the senses are as necessary as food, air, and exercise are for the development of the bodily organization. That the senses feed the mind, and excite the action of its own innate natural powers, but they do not produce these powers."—p. 12.

Of Pride and Humility he thus speaks:—

"*Pride.*—To feel the odiousness and littleness of pride, and the nobility its absence confers on the character, look at its presence as manifested towards yourself in those of no rank, and its absence in those of high and acknowledged station.

"*Humility.*—To what a height of self-conceit that person has attained, who can talk of himself as humble."—p. 71.

Much discussion has arisen among professional men regarding the claims of discoverers of new and improved methods of treatment. The following remarks are worthy of attention, as they convey an important lesson:—

"*Discoverers.*—It is not to him who sees a truth and lets it go again, that the reward of fame is given; but to him, who, by experiment and by reasoning, renders clear to others the result of his patient and laborious thoughts: who will not allow his truth to lie dormant, but who raises it on the conviction of his fellows with as strong relief as on his own. Every one who has investigated any of the domains of truth for himself is conscious that he too makes discoveries, which, as far as the public are concerned, are no new discoveries at all. If the satisfaction to his own mind, that he has some gift of insight, be not sufficient, he may, like the scholar, denounce, in his disappointment, those who have thought his own thoughts before him.

And such experience, in his own case, shows him that many men must have quietly lived and died, to whom the great secrets of Nature, which we think exclusively the property of our age, must have been familiar: men of genuine insight, who from the thoughtful observation of some few facts, saw the operation of great principles which

from circumstances, they kept in their own minds or communicated to those who did not fully see their importance. Types and paper have changed this. Few men willingly let die their discoveries. Men consequently stand now on an eminence which renders their labours easier. The difficulty is rather with the distracting quantity of materials supplied from all sides."—p. 73.

These few extracts will suffice to give our readers an idea of the contents of this valuable collection of essays. We strongly recommend the volume to students and practitioners. In a second edition we think the author would act wisely in announcing his name.

A Practical Hand-book of Medical Chemistry. By JOHN E. BOWMAN, Demonstrator of Chemistry in King's College, London. 8vo. pp. 259. London: Churchill. 1850.

THERE can be no doubt that a little volume of this kind is likely to prove useful; but there are many excellent treatises on the chemical and pathological characters of the blood, urine, and urinary calculi, which have long been in the hands of the medical student. The works of Dr. G. Bird, Dr. Rees, and the translation of Scharling by Dr. Hoskins, the latter containing admirably coloured engravings of urinary calculi, will at once occur to our readers; and Mr. Bowman does not profess to have done more than to have made a compilation from the works of these and other writers.

The greater part of the Hand-book is devoted to the examination of the blood and urine. The other animal principles are then briefly noticed, and the work is brought to a conclusion with a summary of the processes for detecting the common poisons.

We have examined this treatise, and we can recommend it to the student as a useful *elementary* guide; but in practice it will not replace other more extended works on the same subject. The illustrations are numerous and accurate, and well calculated to aid diagnosis. In speaking of the tests for organic principles, the author takes no notice of the fallacies to which they are liable: hence the student might be occasionally led to draw a wrong inference. We observe this defect under the head of Trommer's test and Moore's test for sugar. The description of the analysis of urinary

calculi is good and practical. The Hand-book will pave the way for the study of more extended treatises.

Pharmacopœia in usum Nosocomii Regii Glasguensis. Scriptore R. M'GREGOR, M.D. Editio tertia. 12mo. pp. 19. Glasgow: Graham. 1850.

DR. M'GREGOR has here brought within a small compass a series of useful formulæ. In a public Institution like that of which this professes to be the Pharmacopœia, there can be no doubt that the prescriptions here published have been submitted to ample trials, and have had their value confirmed. One feature in which this differs from other works of a similar kind is, that the doses of the respective medicines are not attached to the formulæ. Besides a complete list of unabbreviated formulæ, there are appended to the volume a series of diagrams representing the decompositions in symbols, and a table of the Latin contractions used in prescriptions. We have here found only one error,—“alutum” pro “alutam,” which may be typographical.

This Pharmacopœia, although specially intended for use in the Glasgow Infirmary, may be usefully consulted both by student and practitioner.

Outlines of Experimental Chemistry: being a familiar introduction to the Science of Agriculture, designed for the use of Schools. By THOMAS TATE. Small 8vo. pp. 89. London: Longman and Co. 1850.

As the title implies, this little volume consists of mere outlines of the elementary parts of chemistry. Numerous experiments of a popular kind are given, with appropriate illustrations of apparatus; but, as our readers may infer, these are adapted only to junior students of the science. The remarks on agricultural chemistry are too concise to be of any practical value. The greater part of the book is a compilation from other well-known treatises accessible to the chemical student.

AMOUNT COLLECTED FOR THE ENDOWMENT OF KING'S COLLEGE HOSPITAL.

It is stated that the amount collected up to the present time, in aid of the proposed building and endowment of King's College Hospital, reaches nearly £4000, in addition to the first published list.

Proceedings of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, May 14, 1850.

DR. ADDISON, PRESIDENT.

On Excision of the Os Calcis in incurable Disease of that Bone, as a Substitute for Amputation of the Foot; with a Case. By WILLIAM BOVSFIELD PAGE, Surgeon to the Cumberland Infirmary. [Communicated by THOMAS BLIZARD CURLING, Surgeon to the London Hospital.]

THE patient whose case is described in this paper was an unhealthy, ill-nourished, scrofulous boy, 16 years of age, with disease of the right tarsus, the result of a slight injury he had received several years before. In the beginning of 1848, suppuration and ulceration took place. In July the whole of the back part of the foot was considerably enlarged, and immediately below the inner ankle was an ulcer, from which several sinuous passages proceeded to the bone, through which a probe could be readily passed into two distinct parts of the substance of the carious os calcis: the disease appeared to be altogether confined to that bone. His health was improved by nourishing diet and cod-liver oil: and in October, further examination confirming the impression that the disease was confined to the os calcis, it was deemed desirable that that bone alone should be removed. The patient being put under the influence of chloroform, Mr. Page made an incision down to the bone, in its whole extent, from the lower margin of the ulcer, about half an inch below the inner ankle, directly below the sole of the foot, to just below the fibula, which would have enabled him to remove the foot at the ankle-joint if the disease of the tarsal bones had proved more general than he anticipated. The posterior flap was carefully reflected from the surface of the bone, the insertion of the tendo-achillis separated, and the joint between the astragalus and calcaneum reached. By the introduction of a small narrow-bladed scalpel he succeeded in dividing the ligamentous structures on either side, and also the interosseous ligament. He then made two incisions, one on either side of the foot, commencing at the junction of the os calcis with the os cuboid, and extending to the middle of the foot.

bone, readily separated the connections of the calcaneum with the cuboid bone; and, after a few touches of the scalpel, the former, with scarcely a particle of soft parts attached, was removed. The astragalus and cuboid bones appeared quite healthy. For two or three days he went on quite well, but after that suffered much from acute inflammation of the tarsal joints, which resulted in the formation of an abscess in the dorsal surface of the foot. This was opened; the wound speedily healed, and no recurrence of a like nature took place. Erysipelas and phlebitis being very prevalent at that period in the hospital, this patient did not escape, but in him the disease was confined to the affected limb. In January, 1849, fourteen weeks after the operation, he left the hospital, when he was able to bear considerable pressure on the foot without suffering, but he was forbid to wear a shoe or use his foot for some months. Sixteen months after the operation the foot continued sound: when sitting, he is able to extend the foot perfectly.

The author concludes with some observations on the desirability of performing this operation in such cases in preference to amputation of the foot.

A Case of Stricture of the Rectum, where-in an artificial anus was successfully established in the left lumbar region; with remarks. By CHOKER PENNELL, Licentiate of the Faculty of Medicine of Rio de Janeiro, M.B. Lond., M.R.C.S.E., formerly Lecturer on Anatomy and Physiology at the Westminster Hospital School of Medicine. (Communicated by BENJAMIN PHILLIPS, F.R.S.)

The patient whose case is described in this communication was a gentleman about 50, who had been operated on for fistula in ano, and about five years ago he discovered that he had a stricture of the rectum, which had been several times freely divided by the knife, but only with temporary benefit. Two years ago, when he first came under Mr. Pennell's care, he was suffering more than he ever had before; the stricture being very narrow, with difficulty admitting the point of the finger, the gut feeling as hard as cartilage: at last, in consequence of violent and repeated straining at stool, the bowel ulcerated, and the feces formed a false passage into the urethra and bladder; from this time nearly all the feces passed through the penis, of which he had also a very narrow stricture, no surgeon having been able to introduce an instrument into the bladder for eighteen years. His sufferings now became much aggravated, the urethra became inflamed in consequence of the acrid feces

passing through it, and sometimes particles of undigested food blocking up that passage. The testicles inflamed and partly suppurated. The patient's sufferings at last became so intense, and his health so rapidly gave way, that on November 4th, 1844, Mr. Pennell determined to perform an operation for his relief, the patient being fully under the influence of chloroform. He commenced by an incision beginning immediately underneath the twelfth rib, on the left side, and continued down to the crista ilii; this incision corresponded to the outer margin of the quadratus lumborum muscle, and by it were divided the skin, fat, and superficial fascia. By a few strokes of the knife were next divided a fascia, and some scattered muscular fibres belonging to the transversalis and oblique abdominal muscles. A dense fascia now presented itself, upon dividing which the outer edge of the quadratus lumborum was clearly seen: and another exceedingly dense fascia (the transversalis) was now carefully opened and divided upon a director upwards and downwards to the full extent of the external incision. Some loose cellular tissue forming the anterior layer of the transversalis fascia having been next cut through without a director, a large quantity of fat was exposed. This having been very carefully removed, layer after layer, the posterior surface of the intestine was at length reached: having satisfied himself that it was really intestine, he carefully opened it with a scalpel and forceps, to the extent of at least an inch and a half. Four sutures were now applied to the margin of the opened gut to secure them to the skin, one at the upper extremity of the incision, one below, and one at each side; so that the bowel was made to gape, and a spectator (without touching the patient) could easily see the interior of it. The gut united in its new position by the first intention to the parts with which it had recently been brought in contact. Within three days after the operation the hectic fever ceased: in seven weeks the patient's appearance was very much improved, having acquired a considerable increase in flesh. He was entirely relieved of his sufferings, and walked about with ease. For the first three or four days the urine passed entirely through the anus; it then began to come through the urethra, mixed with a large quantity of pus: at times it had passed up the bowel and escaped at the wound.

The author dwelt much on the value of this operation in *similar* cases of obstruction; on its comparative facility of performance, and on it being so much less hazardous than opening the bowel in the iliac region through the peritoneum. To M.

Amusat he gives the credit of establishing beyond doubt its claims as a regular operation of surgery. He believes that the dangers of the operation have been very much exaggerated, and concludes by observing—"I would have recourse to it in every case of stricture of the rectum (not curable by the use of bougies) which produced severe suffering to the patient, prevented him following the ordinary avocations of life, or which was beginning to destroy the health, or undermine the constitution."

The discussion which ensued on this paper was almost an echo of what took place some weeks since, when two cases of artificial anus were read. The speakers on this occasion were Mr. Bransby Cooper, Mr. Macilwain, Dr. Black, Dr. Addison, Mr. Hodgson, and Mr. Arnott.

WESTMINSTER MEDICAL SOCIETY.

April 30, 1850.

DR. MURPHY, PRESIDENT.

Case of Enlarged Heart, with Valvular Malformation and Disease, accompanying Small-pox.

THE following case was communicated to the Society by Mr. MARSON:—

Edward Walker, 41 years of age, a porter, was admitted at the Small-Pox and Vaccination Hospital, on the 9th of April, 1850, with confluent small-pox on the second day of eruption. He had not been vaccinated. Ten weeks ago he was struck over the pit of the stomach by the pole of a van, in attempting to stop a horse, and two hours afterwards he began to have palpitation of the heart, which continued more or less ever after. During the first fortnight he went on with his work; under medical care, and subsequently became a patient at St. George's Hospital. His health having improved there, he returned to work for nearly a fortnight, when he was attacked by small-pox. On admission at the Small-pox Hospital, he was unable to lie down in bed, from the great disturbance of his heart; his pulse at the wrist was extremely irregular, no three consecutive beats being alike, and 120 in a minute. On examining the heart with the stethoscope, it was found pulsating with great violence, and very irregularly, and might be heard over a considerable part of the chest. From the extreme irregularity of the pulse at the wrist, the violent and irregular pulsations over the region of the

heart, and the regurgitant sound on the first beat, it was tolerably certain that the patient was suffering from hypertrophy and valvular disease of the heart. He died on the fourth day of the eruption of small-pox. The patient attributed the disease of his heart entirely to the blow he received: he had never had rheumatism nor any other illness from the time he was nineteen, when he had ague. He had suffered a little from *tic douloureux* in his face.

Autopsy.—Heart greatly enlarged; it weighed exactly twenty-one ounces when separated from the pericardium; the lungs were very much gorged with blood, but otherwise healthy; liver not enlarged; aorta healthy. Referring to a table given of the average weight of hearts, in the last edition of Quain's *Anatomy* (vol. ii. p. 1124), from an examination of *healthy* hearts, made by Drs. Clendinning and Reid, it appears that the weight, as given by the former, is nine and a half ounces, and by the latter ten and a half ounces, in men at forty years of age; so that the heart was double the weight of a healthy heart. The man was tall (six feet four inches in height), well-proportioned, and not stout. Both ventricles contained a considerable portion of fibrinous concretions, adhering firmly to the interior of these cavities. There was a cartilaginous deposit at the base of the mitral valve. Instead of three, there were only two valves situated at the commencement of the aorta: this seemed to be an original malformation. The edges of the aortic valves were thickened, having some cartilaginous deposit in them, especially where they met at one end. The valves on the right side of the heart were healthy.

NEWCASTLE AND GATESHEAD PATHOLOGICAL SOCIETY.

Jan. 10, 1880.

MR. GIBB related the following cases, which had recently occurred in the Newcastle Infirmary:—

Two Cases of Latent Aneurism of the Thoracic Aorta.

The first case, a widow, *æt.* 49, wasted and weak-looking, was admitted, under Dr. Cayill, with chest symptoms denoting emphysema and bronchitis. She had been ill for ten months. Symptoms, mild at first, had lately become so aggravated that she rarely obtained more than an hour's rest together, owing to attacks of orthopnea, great dyspnea, and cough, coming on in paroxysms, with thick and copious puru-

lent bronchitic sputa. The pulse was quick, but regular; there was no anasarca. She was so exhausted, and the symptoms so painfully aggravated on the least exertion, that no very searching examination of the chest was made: it was found, however, to be generally unnaturally clear on percussion, especially in front, and that bronchial and sonorous, with moist crepitant râles, were general throughout the lungs; here and there the respiration was almost wanting, and at other parts rude and bronchial. The heart's sounds were clear and normal.

Chronic bronchitis with emphysema were diagnosed. She was a nurse, and had not had rheumatism. The prostration increased, the chest symptoms continuing as severe as on admission, aggravated by what she termed spasm of the windpipe, with some difficulty in swallowing, and vomiting of food quickly after its ingestion, and she died exhausted six days after her admission.

On post-mortem examination, the front of the chest was everywhere too clear on percussion. On opening the chest, the lungs were found voluminous, pressing over towards the middle line, and covering with their emphysematous edges the heart and the aorta even at the top of the sternum: they were both easily removed, and found very cedematous at their base: the bronchial tubes were much thickened and inflamed. On the removal of the lungs, an aneurismal dilatation of the aorta, of the size of the fist, was laid bare: it involved the whole of the calibre of the vessel, commencing where it leaves the pericardium, and terminating where it comes into contact with the vertebrae. On being laid open, the anterior wall of the aneurism was found to consist of all the coats of the vessel, thickened and indurated from osseous and atheromatous deposits; whilst the posterior was formed by a large, flat, and apparently partially organized layer of clot, which, covering at that part the imperfect walls of the sac, prevented the circulating blood from bursting into the trachea or œsophagus, to which the edges of the eroded coats of the aneurism were firmly glued. The rings of the anterior wall of the trachea, just above its bifurcation, were partially absorbed, the mucous membrane inflamed and slightly softened, and the coats of the œsophagus were firmly united to the imperfect walls of the aneurism. The heart generally was slightly dilated, its valves perfect. The viscera of the abdomen somewhat healthy, but somewhat congested.

The other case occurred in a carman, aged 29 (admitted under Dr. Bulman), who complained of severe cough coming on

in paroxysms, together with great dyspnoea, and occasional orthopnoea, terminating in copious frothy expectoration. He stated that he had been ill for three months, and that exposure to cold had given him inflammation of the left side at first, but that after the acute (phrenitic) pain had subsided, the present symptoms set in. His face was slightly puffed up and livid; he was short of breath on any exertion, but had a regular, quiet pulse, and had not lost much flesh. On percussion, the left chest was found almost altogether dull, and the respiration inaudible, except at the apex and interscapular region, which were somewhat resonant, and gave out a weakened and confused respiratory murmur, almost inaudible from soft mucous-crepitant râle: the resonance of the voice, except at the apex, was also inaudible: there was no egophony. The right chest was perfectly clear on percussion, and the respiration free and puerile. The heart's action was quiet, and the murmurs normal. Effusion into the left pleura, with a compressed and oedematous lung, were diagnosed. He was treated by blistering, and a little mercury. On the third day after admission, whilst coughing, florid arterial blood suddenly gushed from his mouth and nose to some distance, and he immediately expired.

By the autopsy it was found that the left pleural sac was filled with turbid serum; the left lung, compressed against the mediastinum, and reduced to one-third of its natural size, gave out a quantity of bloody serum on incising it. The right lung was healthy. An aneurism of about the size of an egg, with extremely attenuated coats, sprang from the aorta by a wide long aperture immediately below the arch; it had contracted adhesions to the right bronchus, close to its origin, and had burst into it at its posterior aspect by a ragged slit in the mucous membrane, which was the sole wall of the sac at that part. The aorta presented patches of atheromatous deposit. The heart was healthy, as were also the abdominal viscera.

These two cases present fair specimens of the difficulty, or rather impossibility, of diagnosing with any certainty those small thoracic aneurisms of the aorta which, enlarging towards the mediastinum, are beyond the reach of percussion or touch; and giving out no abnormal murmurs, are (from the simultaneous presence of lung or pleural diseases sufficient of themselves to account for the symptoms) never suspected until the fearful hæmorrhage, or autopsy itself, reveals their existence.

In the first case, although but a cursory examination was made, there were evidently no auscultatory signs of an aneurism, and excepting the inability to swallow, and the

spasms created by the attempt (doubtless excited by the connection of the aneurism to the œsophagus and pneumogastric nerves), the symptoms were sufficiently accounted for by the extensive emphysema and aggravated bronchitis. In the second case there could be no doubt but that the left chest was full of fluid from recent pleuritis, and that the disabled and oppressed lung was cause sufficient for the dyspnoea, slight cough, and expectoration that were observed on admission and subsequently. The orthopnoea and spasmodic cough which occasionally attacked him, especially at night (but only one paroxysm of which was manifested during the three days he was under treatment), had undoubtedly their origin in the irritation of the aneurismal tumor; and the complaint made of them was so insignificant that not the least idea was ever entertained of the presence of the aneurism. The chest was very carefully explored, and any abnormal murmur or action of the sanguiferous system could not have failed to have been discovered.

Mr. GIBB had had opportunities of examining a considerable number of aortic aneurisms, and did not remember one in which he had not observed that in a greater or less degree the aperture of communication betwixt the aorta and the sac was long and wide, comprehending in many cases the half of the circumference of the vessel, never less than one, and often two or three inches in length; and the edge of the aperture smooth, or comparatively so, and rounded off on either side gradually, both into the aorta and into the cavity of the sac; and since such a disposition cannot but tend to allow the blood to pass in a regular and even current, without much angular resistance, through the sac, he is inclined to think it must be one of the principal concurring reasons why we do not in very many cases hear the slightest abnormal murmurs from the diseased vessel.

Scrofulous Growth from the Spinal Dura Mater.

The subject of this disease, a pitman, aged 26, cachectic, and decidedly scrofulous in appearance, was admitted under Dr. Bulman, with almost complete paraplegia, together with partial loss of sensation in the lower extremities; his legs were frequently jerked up by involuntary spasms; he had some scrofulous sores on them; his bladder was paralysed, but the rectum acted pretty well; he was weak, and affected with hectic paroxysms occasionally; all the abdominal and thoracic viscera appeared to act well. His family was reported free from taint, but that since the measles in his childhood

he had been weak, and frequently attacked with scrofulous glandular ulceration; he had been able to work until five months before admission, when from a sprain of the back he was compelled to cease, but continued to walk about until six weeks previously, when the paraplegia set in with some pain of the loins, especially over the two first lumbar vertebrae, although no distortion or abscess can be detected. With tonics and counter-irritants to the spine he improved somewhat at first, but quickly began to retrograde, and after four months of pitiable distress died completely exhausted: some signs of a lumbar abscess had appeared a little before death.

The spine alone was inspected. In the right loin, deep between the lumbar muscles, was an encysted abscess, communicating with the carious transverse processes of the second lumbar vertebra; the walls of the abscess were a quarter of an inch thick, and consisted of scrofulous deposit, apparently organized; the pus, pure white, thick and curdy in the extreme, composed almost altogether of the amorphous granule of scrofula, with but few traces of purulent cell structure, and containing much larger compound cells of various sizes, made up of numerous nuclei, bound together by a cell wall, and forming a semi-transparent round disc, like cell which are seen in all scrofulous products.

At the upper part of the dorsal region, corresponding in extent to three of the bodies of the vertebrae, a white scrofulous-looking tumor, of cheese-like consistence, filled the spinal canal, and protruded outwards through the intervertebral holes, along with the dura mater; it did not extend to the chord, but had exerted so much pressure upon the medulla, that for half an inch the chord was only of one-third its natural size, and with a congested and thickened arachnoid and pia mater, felt quite soft and membranous; the posterior columns especially seemed to have suffered from the compression. Below this part the chord was not quite so large as is usually seen, and felt softer than natural: there was a considerable quantity of serum in the subarachnoid space.

ACADEMY OF MEDICINE, PARIS.

April 22, and May 30, 1860.

The Functions of the Muscles of the Face studied by the aid of Galvanism.

DR. DUCHENNE forwarded the termination of his researches on this subject. The principal facts contained in his last communication are as follows:—

1. The fibres which are in contact with the two internal thirds of the superciliary arch, corrugate and depress the eyebrow, at the same time drawing it towards the internal angle. These fibres belong to the *orbicularis* and *corrugator superciliaris*; but, from the unity of their action, they should be regarded as forming a distinct muscle. The muscular fibres of the external third of the orbital arch, and of the superior eyelid, depress the lid. The fibres of the lower half of the *orbicularis* raise the lower eyelid, and maintain it in position. 2. The *Zygomaticus major* gives, by its contraction, the expression of satisfaction or gaiety. The *Z. minor*, when in action, gives the expression of sadness, or announces tears. The *Z. major* supports the angles of the mouth. 3. The *levator menti* raises the chin, and raises and everts the lower lip, expressing doubt by the protrusion of this part. 4. The *platysma myoides* appears to be appropriated to the expression of rage, horror, or pain, by drawing the integuments of the lower part of the face downwards and backwards, and exposing the teeth of the lower jaw.

Strongylus Gigas.

M. SÉGALAS read a report on a work by M. Leblanc, a veterinary surgeon, entitled "A Notice of a particular species of Subcutaneous Tumor in the Dog, caused by the Presence of the *Strongylus Gigas*." The work contained observations on three cases of this form of tumor in the neighbourhood of the penis, and of another in which three of these parasites were found in a dog's kidney by M. Plasse.

New Apparatus for the Compulsory Feeding of Lunatics.

M. BELHOMME presented a new instrument, which he had named the *billon-biberon*, and which consists of a piece of wood so perforated, that when placed in the mouth, liquids can be poured through it, or a silver tube can be introduced by its aid, beyond the fauces.

Treatment of Acute Rheumatism.

M. MARTIN SOLON read a report on the treatment of acute articular rheumatism by vesicatories, as contained in a work by Dr. Dechilly, physician to the hospital of Vaucouleurs. M. Dechilly's essay consisted of two parts: the first comprising general observations on the treatment of acute rheumatism; the second part containing fourteen observations of the proposed treatment. The author considers the local inflammation as a sign of a morbid condition of the entire system; and he proposed to attack it by extensive vesications. The report regarded M. Dechilly's

plan as a useful collateral means, but not generally convenient or advisable for the entire treatment, except where the disease may be attended with such a degree of debility or disorder of the digestive organs as shall forbid the exhibition of internal remedies. The reporters, however, considered that M. Dechilly was entitled to the thanks of the Academy, and that his essays should be referred for publication.

Treatment of Intermittent Fever by Dry Cupping.

A DISCUSSION arose on M. Brichteau's report on M. Gondret's treatment of intermittent fever. The conclusions of this report were to the effect that the treatment by dry cupping is better than that by sulphate of quinine, and that it is a more simple and economical method; further, that it is desirable it should be extensively tried in those countries where, the disease being endemic, a large field for observation is offered.

In the opinion of several members, relapses are more frequent under this mode of treatment than under that by sulphate of quinine. The conclusions of the Report were adopted conditionally—viz. that, in the opinion of the Academy, more extended observations are required before the relative value of the proposed treatment can be fairly determined.

ACADEMY OF MEDICINE OF BELGIUM.

April 27, 1850.

Reports on Cholera.

M. LIQUEME read a report on several papers on cholera, which had been submitted to the Academy by the government.

In the first, a Brazilian practitioner proposes sulphur as an antidote to cholera. This substance is to be triturated carefully, for a long time, with sugar of milk, in order to develop its electrical properties. The author considered that sulphur possesses almost specific properties against all contagious maladies. M. Liqueme observed that sulphur possesses no efficacy as a remedy: he has seen persons, while using sulphur for scabies, attacked with cholera and typhus.

The Belgian Consul at Algeria recommended iodide of potassium. The vice-consul at Trieste transmitted an anti-choleric elixir.

M. PELLARIN, a military surgeon, supposed that he had discovered both the cause and the treatment of cholera. He attributed the disease to the respiration of

deleterious gases, but principally to that of sulphuretted hydrogen disengaged from privies. If exposed directly to this poison the disease may be developed without the premonitory diarrhoea. The author regarded diarrhoea as a predisposing cause by its leading to frequent respiration of sulphuretted hydrogen from the same source! The chief means of prevention was irrigation with a solution of sulphate of iron. The curative agents employed by M. Pellarin were chlorine and ether. The reporter regarded this paper as merely speculative, and consisting of groundless hypotheses.

Dr. WACHTER, of Buysbroëk, made a distinction between cholera and cholérine. Dr. Wachter denied the contagiousness of cholera. This paper, the reporter stated, was negligently drawn up.

BIOLOGICAL SOCIETY OF PARIS.

Monthly Summary.—February 1850.

PRESIDENT, M. RAYER.

Arrest of the Action of the Heart by Galvanic Stimulation of the Medulla Oblongata.

M. BROWN-SEQUARD stated that he had confirmed the observations of Budge, Weber, Schiff, and other German physiologists, who stated that when the *medulla oblongata* is galvanised at the point of origin of the *vagus* nerve, the heart suddenly ceases to beat—not from a prolonged persistent contraction, but from the absence of all contraction. The correctness of these statements had been doubted by M. Longet; and for this reason M. Brown-Sequard had considered it requisite to confirm them. M. Brown-Sequard attributed M. Longet's not having arrived at the same conclusion to his having operated in a different manner to that of the German physiologists.

Persistence of the Organic Functions after the Destruction of the Spinal Cord.

M. BROWN-SEQUARD related a series of experiments, in which he had destroyed portions of the spinal cord, of various extent, in pigeons and guinea-pigs, and in which, notwithstanding such injury, circulation, respiration, animal heat, digestion, nutrition, and even the production of feathers, continued for many days as in the normal condition. The conclusions thence derived were the very reverse of those of Legallois, Wilson Philip, Krimer, Chocat, and others, relative to the influence of the spinal marrow on the heart, lungs, stomach, urinary secretion, and animal heat.

Observations on the Phenomena of the Circulation.

A report was read on a work by M. Hiffelaheim, in which the author denies the existence of two circulations, and notices one only—i. e. that between the left and right sides of the heart; and he states that this consists of two parts, one between the pulmonary arteries and veins, and the other between the aorta and vena cava. The author makes a distinction between the duration and the rapidity of the circulation. The whole mass of blood completes the circulation, according to him, in an average period of two minutes and forty seconds: the maximum duration being three minutes and thirty seconds, the minimum one minute and forty seconds. The report speaks in terms of commendation of the facts and reasonings of this work, but at the same time points out that the author has not made himself sufficiently acquainted with the later German and British researches on the same subject.

Crossed sensitive impressions by the Spinal Cord.

M. BROWN-SEQUARD exhibited a guinea-pig, in which the right lateral half of the spinal cord had been divided transversely, as high as the third cervical vertebra. The animal was lively, and could maintain itself on its four extremities, and could even walk. But it would fall on its right side, which was incompletely paralysed. Sensibility was unimpaired, if not increased, on the right side; on the left side, the extremities and intervening surface of the body were scarcely sensitive. This was particularly noticed in the posterior limb.

Pathological Specimens.

M. BOULLAY related a case of ulceration of the stomach, causing perforation of the pyloric artery, with death, consequent on the hemorrhage. Aneurism of the abdominal aorta at its termination was found in the same subject.

M. BOUCHUT, for M. Jobert (de Lamballe), exhibited a salivary calculus, one centimetre in length (= .393 English inches), removed from Wharton's duct.

M. LEBLANC presented a bony cyst removed from the inferior maxilla of a horse.

M. GALLIET related two cases of development of the male human mammary gland, occurring simultaneously with cancerous disease of the testicle.

Congenital Absence of the Radius in Man.
By M. DAVAINE.

According to M. Isidore Geoffroy-Saint-Hilaire, the parts of the osseous system are subject to less variation in number than those of other systems: he mentions only

one example of absence of the radius, a case referred to by J. L. Petit, in the *Mémoires de l'Académie des Sciences*. J. F. Meckel entertained a different opinion, and considered absence of the radius to be not unfrequent. M. Davaine does not concur in the latter opinion, which he considers should be limited to a comparison with other variations in conformation of the osseous system. M. Davaine found only two examples in any of the public collections in France. M. Gay had placed two fetal examples at the disposal of M. Rayer. M. Davaine described these to the Society. The chief features of the cases were—shortening and thickening of the ulna; the forefinger and thumb were wanting; the other fingers were entire, and with the bones of the hand formed an acute angle with the ulna: other anomalies of the osseous system coexisted with the absence of the radius.

Deformities of the Skeleton in a Chicken.

M. RACLE presented a fowl four months old, in which there were found three curvatures of the vertebral column, a lateral inclination of the pelvis, deviation of the caudal vertebrae, and flexion of the right femur.

ACADEMY OF SCIENCES, PARIS.

May 6, 1850.

Comparative Experiments on the Influence of Oxide of Zinc and of Sulphate of Lead on the Animal Economy.

M. FLANDIN has performed the following experiments, with the object of ascertaining how far the workmen engaged in the manufacture of these pigments are injured by their occupation.

A spaniel dog was shaven, and rubbed over daily with an ointment consisting of equal parts of lard and *sulphate of lead*. In the course of ten days the animal showed signs of poisoning—e. g. constipation, refusal of food, and emaciation. This deranged condition of health progressively augmented, and the dog died on the twenty-second day. About two ounces of the sulphate had been employed during this period. The poison was detected, by analysis, in the internal organs, particularly in the liver.

Another dog was shaven, and oxide of zinc was employed in frictions, as in the preceding experiment. Its use was continued for thirty days, without the health of the animal having in any degree suffered: on the contrary, it had gained flesh during the progress of the experiment. As an *experimentum crucis*, the sulphate of

lead was, after an interval of ten days, substituted for the oxide of zinc, and the dog died, with the same symptoms as in the former experiment, at the end of twenty-three days.

Hospital and Infirmary Reports.

WEST NORFOLK AND LYNN HOSPITAL.

CASES OF TETANUS.

BY CHARLES COTTON, M.D., F.R.C.S.

Senior Surgeon to the West Norfolk and Lynn Hospital.

Injury to Foot—Tetanus 7th day—Death in 40 hours.

JOHN CARTER, aged 17 years, agricultural labourer, admitted into the hospital March 29th, 1847, with crushed large toe, and extensive laceration of plantar integuments and fascia of right foot. The accident occurred on the day previous, when he was seen by a medical gentleman, who adjusted the lacerated parts by means of the uninterrupted suture. On admission, the seat of injury being painful and distended, the edges of the wound were immediately set at liberty, and an escape given to a quantity of foul grumous matter. Hot fomentations for several hours, followed by water dressing.

April 8d, Noon.—Toe black and shrivelled from dry gangrene: its removal contemplated. In other respects doing well. Afterwards reported to have experienced, during the afternoon, difficulty in swallowing, and stiffness about the muscles of the neck and lower jaw, leading to tetanus in its worst form by 10 P.M., when Mr. Cotton being from home, ether was inhaled with temporary relief, and partial amputation of the foot performed.

4th.—Symptoms unmitigated. To have twenty-drop doses each of Bellley, and turpentine in syrup every two hours. Etherization again attempted, inducing violent spasm, and so frightful a state of asphyxia, that reanimation appeared improbable. The patient, however, again rallied, but only to endure a more frequent recurrence of spasm and suffering, until a sudden and aggravated seizure ended in death, 40 hours from the commencement of the disease, and nine days after his unlucky accident.

Post-mortem 50 hours after death.—Immense cadaveric rigidity; general encephalic congestion; vascularity and slight ramollissement of the surface of the pons

varolii, and base of cerebellum; and considerable effusion of red transparent gelatinised serum in the cellular tissue external to the cervical spinal theca, and also beneath the arachnoid tunic surrounding the cord.

Fractured Ankle—Lacerated Wounds of Thigh and Arm—Tetanus 14th day— Death on the 21st day.

William Hunt, aged 22 years, farm-labourer, admitted February 16th, 1850. On examination, the skin and flesh above and in front of the right knee were found torn and bruised, and the surfaces of the wound imbricated with gravel; the right outer ankle fractured, swollen, and ecchymosed, and a deeply punctured bleeding wound, together with considerable contusion, existed on the outer side of the right upper arm: the extreme end of the thumb was also torn and bruised. The injuries were caused by a waggon accident, which had just happened at a short distance from the town. The man appeared in a confused, half conscious state, but denied having drank more than two or three pints of beer. Foot-splint loosely applied to the inner side of fractured ankle; wounds sponged and cleansed; the gravel dislodged with much difficulty. The lower limb to be kept constantly surrounded by flannels wrung out of hot water. Cold applications to the arm during bleeding. Low diet.

20th.—Low diet, with occasional effervescent draughts of citrate of potash, and repeated hot fomentations, continued since last report. The whole thigh is painful and swollen. There is extensive suppurative inflammation beneath the integuments around the front and outer side of its lower third, and profuse discharge through the flesh-wound above the knee. The tumefaction about the ankle, which had necessitated the removal of the splint, is subsiding, and the arm injury is doing well. The man is weak and out of spirits. Full diet, and porter.

27th.—Has gone on most favourably. The thigh is but little swollen, and the wound at the knee presents but a superficial discharging surface, about the size of a crown piece. The wounds of arm and thumb are healed.

March 1st.—Stiffness of the muscles of the neck and lower jaw, and slight difficulty in deglutition. Visited at two o'clock, afternoon: partial trismus, and constriction of facial muscles. Ordered electro-galvanism every second hour. The sponges to be applied alternately to the cervical spine, and the hand and foot lately injured. As much nourishment as possible to be got down in the form of strong broth, thickened with oatmeal.

2d.—Was thought to have been benefited by the galvanism last evening. Night sleepless and disturbed. Increased rigidity of muscles of the lower jaw and neck.

Noon.—Ordered in addition:—B. Antimon. Tart. ʒj.; Extracti Belladon. gr. j.; Micas Panis, q. s. ut. ft. mass. divid. in pil. xx.; j. omni hora sumend;—a form of medicine which had been much praised, as having cured a man lately in the hospital with partial trismus following an injury. Galvanism to be continued, and nourishment to be administered as first directed.

3d.—Had not slept. Tetanic symptoms becoming more urgent and general. To have the pills every half-hour. Bleeding, &c., suggested, but objected to, as the patient had been already weakened by profuse suppuration.

5th, 9 A.M.—Complete trismus, general rigidity, and frequent spasm. No sleep. Has passed no water for several hours, and the bowels have not acted. The pills have been given regularly up to this time. More than a pint of urine drawn off by the catheter, and the bowels freed of a large quantity of most offensive feces by the aid of strong injections of salt and gruel. The nurse directed to give the pills a full trial, and to disregard the difficulty she experienced in getting them swallowed.

5, P.M.—Considered much easier in the forenoon after the injection. Managed to swallow the pills, and some porter which he asked for. During the afternoon the symptoms have gradually become more aggravated, and the poor fellow is now in the greatest agony, begging for something to sleep him. The whole body is in a stiffened and nearly straight position; the dorsal spine does not quite touch the bed; the toes are drawn towards the soles of the feet; the limbs are rigidly semi-flexed. There is a peculiar grinning expression of the countenance; quick pulse and profuse perspiration. During each paroxysm of cramp the extremities suddenly start from the bed, and he is obliged to be steadied by the nurse, to prevent his gliding off its lower edge. *Pills given up at noon, as they could no longer be got down.*

A drachm of chloroform was now poured into the fold of a handkerchief, and held over the nostrils: this led to considerable struggling and aggravation of spasm, which soon, however, subsided under the quick inhalation of two drachms more of the chloroform, and sound sleep was induced, attended with complete muscular contraction: the arms came soft; the limbs lay extended, and the jaw fell half-gratifying change lasted two minutes, when an observation in

stander seemed to awake him, and the spasms immediately recurred, but as quickly yielded to another one drachm administration of chloroform: the patient was now left in a sound sleep, and directions given for the inhalation of ten drops of the anæsthetic every ten minutes during the next half hour.

6th, *mane*.—The sleep yesterday evening lasted an hour and a quarter. Has passed a less disturbed night, and been more free from spasm, but did not sleep. The last few hours the usual symptoms have been on the increase: the countenance is contracted, and betrays much anguish; and he begs to be again put to sleep. Inhalation repeated, followed by sound sleep for an hour and a half.

5 P.M.—The spasms have been certainly less frequent and severe, but the man is weaker. Half a pint of concentrated broth and gruel, together with Battley's Sedative Solution, ℞xx.; Spirit Turpentine, ʒss. thrown up the rectum. The patient immediately after rendered unconscious by chloroform, and the influence kept up by ten drop inhalations. Slept soundly two hours. The enema to be repeated every third or fourth hour, according to urgency of symptoms.

7th, *mane*.—"Passed a better night than he had done since the attack commenced, having slept altogether three hours *naturally*. The spasms are neither so violent nor so frequent." Can open the mouth about half an inch. Pulse 96, soft. Skin moist; face congested; frequent escape of flatus from the bowels: there is less of constriction and grin in the expression, but he looks intoxicated, and begs for the "stuff" to be given him. Sound sleep and general muscular relaxation easily induced by the chloroform. To have the injections without the Battley. Prognosis rather favourable, owing to the protracted existence of the disease.

Noon.—Considerable increase of spasm, principally confined to the lower limbs, which are drawn up and rigid. The toes firmly contracted. Chloroform administered, followed by sound sleep, when the mouth fell open, and the abdominal muscles became quite relaxed: *the rigidity of the limbs but little diminished.*

3, P.M.—Had a sudden attack of spasm, during which much frothy saliva issued from the mouth; the face became purple, and pupils contracted; and he appeared to be dying. Bled immediately to a pint by leeches, and brisk friction of the limbs over the cardiac region; tartaric emulsion was administered, and turpentine enema was given, and urine drawn off by catheter.

Vespere.—Symptoms reported as having nearly disappeared. "The abdomen is soft, and there are but slight spasms of the extremities."

8th, *Morn.*—Recurrence of spasm during the night to a fearful degree. The use of chloroform had not been ventured upon, owing to the fit yesterday. Pulse 108; weak. Intellect clear; face suffused; features contorted; passes much flatus by the bowels. The whole body is in a straight, stiffened position, and, when raised at the shoulders, rests only upon the heels. He seems in a state of intense bodily suffering, and prays to be put to sleep. Nutritive enema, with turpentine, thrown up, and chloroform again resorted to. During its inhalation the patient at first rambled unconsciously about his business and horses; but sound sleep was at length induced, lasting an hour, when the bowels acted. *Muscular relaxation on this occasion incomplete.*

4, P.M.—Swallowed with difficulty $\frac{3}{4}$ of broth. Shortly afterwards, when about to have the chloroform administered, a sudden paroxysm, similar to that of yesterday, occurred, and the patient laid for a time as if lifeless. A dash of cold water led to a long noisy inspiration and partial rallying, and a return of suffering, continuing until 8 P.M., when the whole body became quite cold, and fixed in a state of permanent spasm, in which he died.

Post-mortem after 32 hours.—Body extremely rigid; extensive cadaverous lividity of the depending surfaces of the neck and back; general venous congestion of the meninges and substance of the brain, a section of the white matter showing numerous dark bloody points; brightish red *inflammatory* (?) vascularity, and considerable sub-arachnoid effusion of reddish serum about the medulla oblongata, pons varolii, and inferior aspect of cerebral hemispheres, and also around the *cervical* spinal cord, but no fibrinous exudation; slight softening (?). Further inspection was forbidden.

REMARKS.—Impressed with the belief that the success in the few instances of reported cure of traumatic tetanus has depended rather on an accidental state of the constitution modifying or diminishing the severity of the disease, than upon the various plans of medical treatment pursued, and having witnessed the failure of etherization and amputation in Carter's case, as well as the utter powerlessness of frightful cauterization of the spine, the administration without limit of numerous sedatives, and the endermic application of the *vegeto-alkaloids*, strychnine and morphine, in cases of acute tetanus, at the

Borough hospitals, and also the worse than uselessness of unstinted bleedings, and the most powerful anodynes, in a similar deadly disease,—*hydrophobia*,—where an after-death inspection failed to disclose more than some inconsiderable redness of the fauces, and masses of undigested opium in the stomach,—it was determined in the case of Hunt to allow the disease to run its course, and to leave the patient entirely to nature, relying only upon the frequent introduction of fluid nutriment to support the strength, and the empirical passing, at short intervals, of energetic currents of electro-galvanism between the cervical spine and the lately injured extremities. On the second day of the disease this intention was given up, and a request was made (with an understanding that the treatment should not be further complicated) for a form of tartar emetic and belladonna, which was alleged *solely* to have contributed to the cure of a case of trismus lately in the hospital. This step was taken altogether in deference to the strong opinions entertained and expressed of their successful efficacy, and with no expectation of benefit from such long-since-tried remedies, nor any confidence whatever in the case "cured" having been one of *true acute tetanic* locked-jaw, or even one equalling in severity that occasionally observed in simple idiopathic or local trismus, so far as a judgment could be formed from the reports, and a casual sight of the patient. On the fifth day, as the notes state, in spite of a persevering trial of the pills, the disease had attained a fearful degree of violence; and it was then, the bowels having been well cleared, that the chloroform was resorted to with so much relief as to lead to its repeated administration at intervals up to the 7th, when the chronic stage of the disease, and the marked palliative influence of the chloroform, encouraged a hope that under its continued use, and the frequent plying with concentrated nourishment, the patient might be enabled to survive his ordinarily fatal malady. Scarcely, however, was the hope entertained, ere the sudden and unexpected convulsive attack occurred, followed by a period of decided amelioration. This, on the 8th, was succeeded by a gradual increase of spasmodic torture, and a recurrence of the tetanic paroxysm of the previous day, terminating in a confused exhausted condition, and finally in death, leaving the particulars of the case destitute of any practical interest beyond that of confirming the already established palliative reputation of the chloroform.

The nearly identical post-mortem appearances in the two cases, viewed as cause or consequence, are not considered un-

worthy of publication; and, although no positive conclusions can be drawn, or fixed rules of treatment be acted upon, it remains for further experience to decide whether the inhalation of chloroform *at the very onset* of this formidable disease, and its occasional repetition, combined with a steady endeavour to support the strength of the patient, and mild measures directed to the obviating of cerebro-spinal congestion, have not a decided preference over the old hacknied attempts at remedy, which reason and analogy condemn as useless and absurd, and which practical experience has proved to be utterly inert.

Correspondence.

ON THE EFFICACY OF LIQ. CHLORINII IN CASES OF GASTRO-ENTERIC IRRITATION.

SIR,—During the prevalence of cholera last summer, I twice, through the agency of your valuable periodical, endeavoured to call the attention of the profession to the great efficacy of the Liq. Chlorinii as a remedy in that disease. Since that time I have had many opportunities of testing the virtue of the remedy; and I am so convinced of its efficacy in diseases connected with irritation of the stomach or intestinal canal, that in almost all such cases it is the medicine to which I first have recourse. My apology for again intruding upon your space must be my opinion that it is the duty of every medical practitioner to make known the result of his experience in the use of remedies whose value is not generally appreciated. Such, it appears to me, is the case with the Liq. Chlorinii.

Within the last few days I have observed several most striking instances of its remedial power. One case was that of a woman, aged 60, who had suffered for nearly twelve hours with vomiting and purging, accompanied with severe cramps in the abdominal muscles, the first dose (3iij. ex. aq.) allayed *all* the symptoms; and the use of the medicine for two days, in doses of 3j. in water with Tinct. Hyoscy. m̄v. every three or four hours, cured the patient.

Another case to which I was called on the same day was that of a man whom I found fainting, with diarrhoea, vomiting, and cramps of the lower extremities. I treated him with Liq. Chlorinii; and, on visiting him a few hours afterwards, he smiled, and said, "I suppose you scarcely know me." The case rapidly recovered, without the use of any other remedy.

I will not farther intrude upon your valuable space than by again expressing my

conviction that the remedy is a most efficient one in all cases of gastro-enteric irritation: and, should the dread disease, cholera, again come among us, as many seem to expect, I trust the medicine may prove as useful in the hands of my fellow-practitioners as I found it during the epidemic of last year.

I have not alluded to the use of the Liq. Chlorinii in scarlet fever, as I believe in such cases its beneficial effects are generally known and appreciated.—I am, sir,

Your obedient servant,

C. W. MANN,

Surgeon.

Medical Officer to the Northern District of Clerkenwell, &c.

2, Myddelton Square,

May 15, 1850.

* * * The remedy here suggested is very simple, and deserving of a trial.

Medical Intelligence.

THE CHOLERA AT BOMBAY.

THE last Indian mail brings the intelligence that cholera has broken out with virulence in the European Artillery barracks at Bombay. The second battalion of Artillery, now in these barracks, were to be moved thence into tents pitched for them on the esplanade of the fort.

THE REAPPEARANCE OF THE CHOLERA IN PRUSSIA.

THE *Opinion Publique* states, on the authority of a letter dated Magdeburg, the 9th instant, that the cholera has just reappeared in three towns of the Saxon province of Prussia,—Halberstadt, Oschersleben, and Strassfurt, all three situated in the district of Magdeburg. In the first of these places there had already been, since the 20th of April, 82 cases of cholera, and 39 deaths.

VALUE OF MEDICAL EVIDENCE.

SUCH is the exactness of the evidence given on Professor Webster's trial by medical gentlemen of Boston and vicinity, that the community must be convinced of the profound attainments of those who are thus shown to be masters of their profession. The re-construction of the skeleton of the late Dr. Parkman, by the mere fragments of different bones which were found, indicates the very deep study that has been bestowed on anatomy by those who were able to accomplish a feat so novel and remarkable. Dr. Keep's careful and explicit testimony, too, shows what perfection the art of dentistry has attained in New England,

and exhibits in an interesting manner the mode of making records by moulds of the parts to be benefited by art. The silent evidence of a mineral tooth, sliding into the matrix in which it was made, and fitting no other place, amounts to demonstration in a case like this. There is a kind of medical testimony that is weakened by efforts to give it strength. Those who venture beyond what is requisite, by advancing hypotheses, instead of simply keeping close to the lines drawn by nature and fact, add nothing to the credit of the profession, and do not conform to what is required by modern medical jurisprudence. Little of this has been manifested, however, on the present exciting trial.—*Boston Med. Journal*.

PROFESSOR WEBSTER'S CONVICTION.

THE trial of Dr. Webster, which has occupied the public mind for the last fortnight to an extent unprecedented in a criminal case, was terminated late on Saturday evening last by a verdict of "Guilty" from the jury. Notwithstanding the general sentiment, from a careful analysis of the testimony during the trial, that the prisoner was guilty of the awful crime for which he was indicted, the announcement of the verdict produced a shock which was felt through the whole city. Thus a man who has been in the highest walks of society, esteemed one of the pillars of science, and a Professor in Harvard University, the first and oldest institution of learning in America, must suffer death for the horrible crime of murdering a fellow being,—a member of the same profession with himself. The trial may be considered as one of the most important on record, and possesses a painful interest to the medical profession. In addition to the government testimony which has already been given in the *Journal*, it may be well to state in a few words that the janitor of the college testified to an interview on Monday, the 19th, at the College, between Drs. Parkman and Webster, in which loud words were used by the former respecting the money due to him; that an appointment of another meeting, on the fatal Friday succeeding, was made by Dr. Webster, which he himself acknowledges, and also says that Dr. Parkman came, and he paid him some money; that Dr. Webster's rooms were kept constantly locked and that day, unusual heat was kept up in the furnace, and that tan and faggots were brought to the College; that the fire took around the remains corresponded to that in Dr. Webster's room; and that anonymous letters sent to the City Marshal, directing his attention, in searching for the remains, away from the College, were thought by experts in pen-

manship to have been written by Dr. Webster. The defence consisted mainly in the testimony of various highly respectable individuals that the character of Dr. Webster was good as a quiet and peaceable man,—of his three daughters, as to the time spent at home by their father before his arrest,—of four or five individuals, that they saw Dr. Parkman after two o'clock on Friday,—and of Dr. Morton, respecting the teeth found in the furnace. Sentence of death was passed upon Professor Webster on Monday,—the day of execution to be appointed by the Governor.—*Boston Med. Journal*.

M. CHEVALLIER'S REMEDY FOR DRUNKENNESS.

MONS. A. CHEVALLIER has suggested a new plan of treatment for counteracting the effects of intoxication. It consists in giving a mixture composed of sugared water and the acetate of ammonia in the following proportions:—

Acetate of Ammonia, 15 decigr. (23 grs.)

Eau sucrée, 160 grammes (5 oz.)

M. Chevallier proposes to establish dépôts for this mixture at all the military posts, for the purpose of its being administered to drunken persons met with in the public way.—*L'Opinion Publique*, 13 Mai.

. M. Chevallier does not inform us on what principle he recommends the use of acetate of ammonia. As a method of treatment, cold affusion or the cold douche, would have a better and more permanent effect.

POLITICAL CHANGES A CAUSE OF INSANITY.

THE *Opinion Publique* states, on the authority of a letter dated Vienna, the 5th instant, that "a melancholy phenomenon, which always follows great political commotions, shows itself at present amongst us in the extraordinary number of cases of mental alienation. A single week never passes without many persons of our city being struck with this terrible malady. The number of inmates in the General Hospital of the Insane at Vienna, which before the revolution varied from 120 to 250, is now 980, of whom the greater number are from 20 to 25 years of age."

UNIVERSITY COLLEGE, LONDON.

THE Council at their session on Saturday last appointed Mr. George Viner Ellis to the professorship of anatomy, which had become vacant in consequence of the expiration of the period for which he had been appointed Junior Professor of Anatomy, and of the resignation by Professor Quain of the office of Senior Professor of Anatomy. Professor Quain will continue to be Special Professor of Clinical Surgery, and surgeon to the hospital.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practice, on Thursday, the 16th of May:—Henry Lawrence, Bath—David Arthur, Neath, Glamorganshire—Christopher Atkinson Newnham, Farnham, Surrey—Frederick Bateman, London—Thomas James Duthoit, London—Pierre Eloy Bachelet, London—William Eddowes, Shrewsbury—Alfred Clark, Twickenham, Middlesex.

Selections from Journals.

CASE OF POISONING WITH HYDROCYANIC ACID. BY ROBERT CHRISTISON, M.D. RECOVERY BY COLD DOUCHE.

A GENTLEMAN, about sixty years of age, whose mind had begun to give way under the pressure of dissipation and misfortune, and who had several times threatened to commit suicide, hastily summoned his wife one evening, told her he had just taken prussic acid to put an end to his miseries, and immediately fell down senseless on a sofa, without either cry or convulsion, but drawing his breath deeply, forcibly, and slowly. Medical aid was instantly sent for in all directions. Nearly half an hour appeared to have elapsed before I reached him. Dr. Adam Hunter and Mr. Carmichael had arrived, however: the stomach-pump had been immediately resorted to, and the first stroke of the pump was made as I entered the room.

The convulsive respiration at the outset had been soon succeeded by regular breathing, with snorting inspiration, and moaning expiration. The insensibility was complete from the first: the body was excessively relaxed, and without any convulsive movement; the eyes were wide open, staring straight forward upon vacancy, injected, watery, and with the pupils somewhat contracted, but not more so than they often are naturally in persons of his age; and the face and head were congested and hot. The introduction of the tube of the stomach-pump did not elicit the slightest sign of consciousness. In this state I found him on my arrival—wholly unconscious under all ordinary mechanical stimulation, totally relaxed and powerless, and breathing deeply, laboriously, and stertorously, but with ordinary frequency. The pulse was above 100, very small, feeble, yet regular.

The first liquid withdrawn by the stomach-pump, amounting to six ounces, was a colourless, nearly clear, watery fluid,

being little else than water introduced by the pump upon an empty stomach, for he had taken no food since breakfast. My two friends could not observe any odour of hydrocyanic acid in this fluid, even while warm and fresh drawn; and I could detect it only faintly, and, I must admit, equivocally, on whiffing it slowly and steadily for some seconds. Nor was there any hydrocyanic acid odour in his breath, or near him, or in any part of the room.

The stomach was quickly and repeatedly cleared out, and ammonia was applied to the nostrils from time to time, but without any sign of reviving consciousness. His head was then brought to the edge of the sofa, and, while it was held over a bucket, a stream of cold water was gently and steadily poured over it for two minutes from a large jug, a foot or so above him. During this proceeding the breathing rapidly became deeper and softer, and without snoring. The head and face, very much cooled, presented less turgescence. The eyes were suddenly turned in a lateral direction, and then an attempt seemed to be made to fix them upon any one who put a question in a firm voice. From this time he slowly recovered without any further treatment; and, in an hour and a half from the time when he gave the alarm, he was able to mutter "Yes" or "No" correctly when questioned, and he could turn on his side without assistance. When not roused, however, by being spoken to, he fell into a restless sopor, with moaning and tendency to shivering. In three hours he was tolerably sensible, but drowsy: he slept profoundly all the subsequent night, and next morning he was quite sensible, though still sleepy. His mind was evidently unhinged, but not more than before the act: and it has continued more or less so ever since, rendering seclusion from general society indispensable.

As in this instance no bottle could be found in the room or under the window, and no satisfactory hydrocyanic odour could be perceived in the apartment, in the breath, or in the fluid first withdrawn from the stomach, a doubt might justly have arisen whether hydrocyanic acid had been really swallowed. The symptoms, however, were so similar to those described as attending the slower cases of poisoning with this substance, as to leave at the time scarcely any doubt in my mind. Accordingly, on examining the liquid first withdrawn, I detected the poison in it by chemical analysis. It was first subjected to distillation, after the addition of a few drops of sulphuric acid; and half an ounce of clear fluid was thus drawn off. This had only a very doubtful hydrocyanic odour, although there was no other odour

strong enough to cover it. But on adding two drops of the pharmacœutic solution of potash, then a few drops of the two sulphates of iron, mixed in the proportion of one equivalent of sesquioxide-sulphate and two of protoxide-sulphate, and, lastly, a single drop of sulphuric acid, a considerable precipitate of Prussian blue was obtained instantly and characteristically. Meanwhile the patient gradually admitted that he had asked, in the morning of the act, at a certain druggist's, for a sufficient dose of prussic acid, of full strength, to kill a dog, and that he got a *drachm*. The druggist afterwards supplied Dr. Hunter with what he believed to be a similar quantity from the same stock. This I found to amount to forty-five minims; and, on applying the very convenient test of the Edinburgh Pharmacopœia, I ascertained that it was of the due strength, and neither too weak nor too strong. The acid, therefore, contained about a thirtieth of pure hydrocyanic acid; so that our patient had taken between a *grain and a half* and two grains of radical hydrocyanic acid.

The practical deductions to be drawn from this case are various, and not unimportant.

1. The symptoms being so intense, while there still remained some poison to be absorbed from the stomach, little doubt can exist that the case would have proved fatal without assistance. Since the trial of Mr. Tawell, doubts have been expressed as to the accuracy of the statement in my book on Poisons, p. 770, that two-thirds of a grain may prove fatal; because the facts on which that statement is founded had not been very accurately recorded by their authors. The present case, however, will at all events render it in the highest degree probable that a *grain and a half* will prove adequate to occasion death.

2. It is clear that death may be caused by hydrocyanic acid *without any odour* of it being remarked in the breath, or in the first fluid withdrawn from the stomach, even although the odour be carefully sought for, and although the poison be present.

3. The notion entertained by various writers in the London journals on the occasion of the trial of Tawell, that it is an invariable circumstance that a *piercing cry* ushers in the action of a poisonous dose of hydrocyanic acid, is evidently erroneous, and founded on limited experience.

4. Dr. Herbat, of Göttingen, was the first to propose the *cold affusion* as a remedy for poisoning with hydrocyanic acid. Mr. Bankes, of Louth, seems to have been the first to substitute the cold *douche* of the head only. For many reasons, the latter would seem, *a priori*, to be the more suitable; and the present case

shows that it is an energetic remedy, when the other means available in so urgent an emergency are inefficacious. — *Monthly Journal of Medical Sciences*, Feb. 1850.

REMARKS.—This is a most valuable case in the history of poisoning by prussic acid. It shows that the *fatal dose* of this poison is now fixed as accurately as it need be for practical purposes. This case presents the largest dose from which a person has been known to recover. In one reported by Mr. Nunneley in the *Provincial Journal*, a man recovered after having swallowed $1\frac{1}{2}$ grains of anhydrous acid: here the person recovered after having taken $1\frac{1}{2}$ gr.; but the recovery must be set down to the good effects of immediate treatment by cold affusion, or rather the *cold douche*. It is impossible to doubt that, had this individual been left to himself, he would have died. That a "piercing cry" or "death scream" accompanies or has any connection, whatever with poisoning by prussic acid, is completely disproved, not only by this, but by many cases recorded in this journal. It never had any other foundation that we know of than a crude speculation from the occasional effect of the poison on animals. The absence of *odour* from the breath and from the fluid *first* drawn from the stomach, although this fluid was proved to *contain* the poison, shows that, if medical speculation had been allowed to have its way at the trial of Tawell, what a miserable mistake would have been made, and how completely justice would have been defeated! Dr. Christison's statement, that "the poison may exist in the stomach, though not appreciable by the sense of smell," was attacked as an unfounded dogma, and every kind of medical and legal sophistry was employed to deprive this statement of that credibility which it deserved. Fortunately the attempt was a signal failure, and brought disgrace upon all concerned in it. The present case affords an additional proof that the opposition to Dr. Christison's view, could have arisen only from ignorance or an utter want of experience on the properties of this poison.

CASE OF POISONING BY ARSENITE OF COPPER. BY MM. HOUZE AND JAUBERT.

In July, 1847,^a a child, six years of age, died after an illness of two days. The symptoms observed were those of cerebral congestion, with violent convulsions, severe pain in the throat and epigastrium, frequent vomiting, an erythematous eruption, and lastly, death in fearful agonies.

The sister of this child was seized on the same day with frequent vomiting of a viscid, sour, bluish-green matter, and with purging of brownish sero-mucous stools. There were present also symptoms of cerebral congestion, violent pain in the throat and abdomen, a small frequent pulse, a rubecular eruption on the trunk and coldness of the surface.

Seven days previously these children had eaten some bonbons, after which, during the night, the latter suffered colicky pains and sleeplessness; but these symptoms subsided, and, with the exception of constant thirst, she appeared in good health up to the time of the appearance of the alarming symptoms above-mentioned.

The diagnosis, under these circumstances, was obscure. It was doubtful whether the case was one of a severe exanthem, of cholera, or of poisoning. The treatment was therefore directed to the symptoms. At the same time it was ascertained by exhumation of the dead body of the first-mentioned child, by chemical analysis of the contents of the stomach and intestines, that the bonbons had contained arsenite of copper. Hydrated oxide of iron was then administered by the mouth, and being rejected by vomiting, it was given in enemas, while the inflammatory symptoms, referable to the stomach and brain, were treated on general principles.

The recovery of this patient fluctuated, and was long delayed: we quote some of the more prominent symptoms, from the narrative of these given at some length by the authors.

On the third day the symptoms of gastritis were unabated, and those referable to the cerebrum were aggravated. The evacuations from the intestines were of a green colour; the spots on the skin had become of a blue colour.

On the fifth day trismus appeared, with convulsive motions, and great increase of pyrexia and cerebro-spinal excitement.

On the sixth day these unfavourable symptoms had disappeared. But every evening, at about the same hour, they returned, with the addition of terrible and most distressing agony.

On the seventh day, ulceration of the tongue, gums, and anus.

During the four following days the

symptoms continued much the same; on the eleventh the patient vomited some greyish pseudo-membranous matter.

It was not until the twenty-seventh day that any real amendment was observed. After this time the functions of the mucous membranes, and of the various glands, became gradually restored; after the vomiting of a very considerable quantity of grey false membranes accompanied with frothy mucus. Hopes were now entertained of saving the patient's life, but these were not realised without her having suffered grievously from the more chronic effects of the poison, for a period of two months longer.

General dropsey, diarrhoea, dysuria, suppression of urine, attempts at suicide, nocturnal exacerbation, were noticed. On one evening the child's head became enormously swollen during sleep, respiration and circulation seemed to have ceased, the surface became cold, and movement there was none: this state continued for several seconds—a copious stool of greenish fetid pseudo-membranous matter was attended with some amendment of the child's condition: the amendment was but short, the symptoms returned, and were attended with severe pain in the epigastrium—relief was procured by external warmth; perspiration, alternating with syncope, occurred; digestion failed; the blood became anæmic. Under the use of quinine, iron, wine, and diuretics, this little patient, with many fluctuations, at length recovered—"but she was no longer an infant of four years of age,—she was a little debilitated old woman, and all her movements were embarrassed by a kind of palsy: the state of the brain was rather that of an idiot, her memory was lost, and the expression of her countenance was grave and sad.

At the end of two years from this time, though in other respects all symptoms of poisoning have disappeared, the epigastric pain occasionally returns; her memory, with the cheerfulness of youth, has returned.

Two other individuals of this family also suffered from the poisonous effects of the same parcel of bonbons, but in various degrees, the nature of which, like the preceding, would not have been detected but for the first case; and if death had followed they would probably have been recorded as cases of cholera.—*La Presse Médicale*, 1849. x

ELEPHANTIASIS—DR. REESE'S NOTES OF HOSPITAL PRACTICE.

SEVERAL cases of this formidable disease have been presented, but not one of them was in a state admitting of successful treatment. The most remarkable of them was

in a woman of immense size, said to weigh four hundred and fifty pounds. With the characteristic degeneration of the skin of the abdomen, thighs, and legs, which belongs to this malady, she suffered under ascites, and died soon after entering the hospital. Such was her obesity that the abdominal walls were found to be of the thickness of five inches, and the fatty deposits about the heart measured two inches in thickness.—*Dr. Reese, in American Journal of Medical Sciences, Jan. 1850.*

BOOKS & PERIODICALS RECEIVED

DURING THE LAST TWO WEEKS.

Pathological and Surgical Observations on Diseases of the Joints. By Sir B. C. Brodie, Bart. V.P.R.S. &c. 5th Edition.

A Theoretical and Practical Treatise on Human Parturition. By H. Miller, M.D. Louisville, U.S. London: Thos. Delf.

The Fifth Fasciculus of Anatomical Drawings selected from the Collection of Morbid Anatomy in the Medical Museum at Chatham. Presented by Sir J. McGrigor.

The Types of Delirium Tremens: their Pathology and Treatment. By James Bird, A.M. M.D. &c.

Atalektasis Pulmonum. By G. A. Rees, M.D. Lond.

The Principles of Surgery. By John A. Orr, F.R.C.S.I. one of the Surgeons of the City of Dublin Hospital. Dublin, 1850.

Researches on Magnetism, Electricity, Heat, Light, Crystallization, and Chemical Attraction. By Karl Von Reichenbach. Translated and edited by William Gregory, M.D. F.R.S.E. Parts 1 and 2. 1850.

Familiar Views of Lunacy and a Lunatic Life. By the late Medical Superintendent of an Asylum for the Insane.

The Boston Medical and Surgical Journal. May 1850.

Comptes Rendus. Nos. 17 and 18, 29 Avril and 6 Mai.

Casper's Wochenschrift für die gesammte Heilkunde. Nos. 14 to 17, April 6th to 27th.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, May 18.

BIRTHS.	DEATHS.
Males.... 780	Males.... 464
Females.. 710	Females.. 418
1490	880

CAUSES OF DEATH.

ALL CAUSES	880
SPECIFIED CAUSES	865
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	147
<i>Sporadic Diseases, viz.—</i>	
1. Dropsy, Cancer, &c.	29
2. Brain, Spinal Marrow, Nerves, and Senses	109
4. Heart and Bloodvessels	35
5. Lungs and organs of Respiration	145
6. Stomach, Liver, &c.	61
7. Diseases of the Kidneys, &c.	8
8. Childbirth, Diseases of Uterus, &c.	5
9. Rheumatism, Diseases of Bones, Joints, &c.	19
10. Skin.....	4
11. Old Age	31
12. Sudden Deaths.....	28
13. Violence, Privation, Cold, &c....	37

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	5	Convulsions.....	26
Measles.....	21	Bronchitis	52
Scarlatina	16	Pneumonia	63
Whooping-cough	36	Phthisis	124
Diarrhoea.....	11	Lungs	7
Cholera.....	1	Teething	19
Typhus.....	27	Stomach	4
Dropsy.....	14	Liver	16
Hydrocephalus	24	Childbirth	2
Apoplexy.....	29	Uterus	3
Paralysis.....	19		

REMARKS.—The total number of deaths was 12 above the average mortality of the twentieth week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer	29.81
Thermometer	49.2
Self-registering do.	Max. 90.5 Min. 24
From 12 observations daily. Sun.	

RAIN, in inches, 0.23.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 5° below the mean of the month.

NOTICES TO CORRESPONDENTS.

A Student.—Attendance in a London medical school is not necessary, but the provincial hospital must be an institution recognised by the College.

Dr. C. H. Jones's paper will have early insertion. D. R.'s letter will be published next week.

Mr. Salter's case of Epilepsy has been received, and will be inserted.

The paper on Tuberculosis of the Uterus, by Mr. Holmes Coote, shall appear.

Mr. W. J. Cox.—The pamphlet shall be noticed with others on the same subject in an early number.

Mr. G. Harvey's Cases have reached us, and will be published as soon as possible.

The Report of the Pathological Society in our next.

The Memorials from the National Institute and from Manchester were too late for this number. They shall appear next week.

RECEIVED.—The Bristol Mirror.

Notice.—We have to request that all ADVERTISEMENTS may be addressed directly to MESSRS. LONGMAN AND CO. Paternoster Row, and marked on the outside "ADVERTISEMENT." Great delay in the insertion has arisen from their having been addressed to the EDITOR of the Journal.

Lectures.

THE

LUMLEIAN LECTURES FOR 1850.

Delivered at the Royal College of Physicians.

By R. B. TODD; M.D. F.R.S.

ON THE PATHOLOGY AND TREATMENT OF
DELIRIUM AND COMA.

LECTURE III.—(Concluded.)

LET me now inquire whether any of the other forms of delirium which I have described will admit of a similar or analogous explanation to that which I have given of delirium tremens.

That form of delirium, which most closely resembles it, is the renal epileptic; and this affords very striking points of analogy with delirium tremens as to the circumstances which accompany its development.

Thus, the blood is the seat of a long course of chronic poisoning due to the defective action of the kidneys and the insidious chronic disease of those organs—due, also, perhaps, to the ingestion of deleterious materials; for the subjects of this disease are frequently addicted to intemperate habits both in eating and drinking.

There is a prevailing opinion that the blood is poisoned in cases of this description by the accumulation in it of urea which the kidneys are unable to eliminate. The foundation of this view was the celebrated experiment of Dumas and Prevost, which consisted in the extirpation of the kidneys from a dog, which afterwards died with symptoms referrible to disturbance of the cerebral functions, and urea was discovered in large quantities in the blood. A similar result followed a repetition of the experiment upon dogs, cats, and rabbits, by Mayer, and also by Vauquelin and Segalas; and in every case urea was found in abundance in the blood. Now there can be no doubt, that, in a large number of the cases of chronic disease of the kidney, urea is prone to accumulate in the blood; and it is highly reasonable to suppose that when it reaches a certain point in quantity, or when the blood assumes a certain degree of poverty favourable to the exosmose of its poisoned serum among the elements of the tissues, then the signs of poisoning appear—in the delirium, or in the coma.

Very recently, my friend, Dr. Owen Rees, whose opinions are entitled to the utmost respect, has cast a little doubt upon this view of the poisonous effects of urea, by

the narration of a case in which there were no symptoms of poisoning, but the poison was present: a larger quantity of urea was detected in the blood than he had ever found before in a case of Bright's disease. But Dr. Rees throws out a suggestion that probably a certain tenuity of the blood is necessary to ensure the poisoning influence of the urea. In this view I fully concur, and believe that the particular exception to which Dr. Rees referred was caused by the state of the blood; for all analogy shows that a poisoning influence will take place more rapidly with a thin blood than with one of normal density.

Dr. Christison, indeed, had already referred to cases, in which the urea was present in the blood without any poisonous effects. But these were exceptional cases; and there is no reason to deny that the tolerance of the poison might have been due to a peculiarity in the blood itself.

In the recent epidemic of cholera we had too many proofs of the connexion between imperfect excretion by the kidney and delirious and comatose affections. How many were the cases of individuals who, having weathered the dreadful storm of the early and more violent symptoms, afterwards passed through delirium and coma to death; poisoned in some cases in a manner strikingly similar to that by opium, and always connected with the defective action of the kidneys! And how rapidly, and even suddenly in many instances, were the symptoms removed by a free discharge of urine! In these cases I apprehend there can be no doubt that the poison was urea.

The view, then, that urea accumulating in the blood may poison the brain as alcohol and as opium do, appears to me to be a highly reasonable one.

The characters of the blood in cases of chronic renal disease have been well studied, and these are identical with those which we infer to belong to the blood of patients labouring under delirium tremens. They are, an increased proportion of water—a diminution of albumen—a diminution in a very marked manner of the red particles. This condition of blood is very favourable to serous transudations through the parietes of the vessels, and very unfavourable to the removal of effete matters from the tissues. The exosmose from the blood-vessels would doubtless be immensely in excess of the endosmose unto them.

Thus, we have in this form of delirium a chronic gradual perversion of nutrition,—the development of a poison in the blood,—an impoverished state of that fluid: all, conditions which we have seen to exist in delirium tremens.

There can, I think, then, be no doubt that the pathology of delirium tremens,

and of the renal epileptic delirium, is essentially the same.

Nor does it appear to be at all unreasonable to view the *simple* epileptic delirium as of the same nature,—that is, due to a contaminated and impoverished state of the blood. In the Lumleian lectures last year I brought forward several facts and arguments to show that both chorea and epilepsy are diseases of humoral origin; that the epileptic paroxysm is probably caused by the accumulation of a morbid matter in the blood, which excites the polar force of the nervous matter of the brain, and so may give rise to delirium, or convulsions, or coma. If this morbid matter be determined in certain quantity to the centre of intellectual action, we have delirium; if determined at the same time, in the same, or in greater quantity, to the centres of emotion and of sensation, we have convulsions and coma.

The hysterical delirium is much of the same nature as the epileptic,—just as the hysterical paroxysm is nearly allied to the epileptic fit, and often so much resembles it as to render the diagnosis a matter of considerable difficulty. There is no one of the nervous diseases which more clearly belongs to the class of humoral diseases than hysteria. It would be easy to adduce a host of facts in proof of this statement. Nor can we ever, in the most aggravated states of hysteria, ascertain the existence of any morbid process in any part or parts of the body which can at all account for the phenomena. It is common to attribute them to a sympathy with the uterus; but there are objections which appear to me to be fatal to this doctrine. First, the organ which is supposed to be thus capable of disturbing the nervous system is but poorly supplied with nerves, and has a very slight connection with the nervous system; secondly, in many of the cases of even the most severe hysteria, the uterine affection is *nil*, or of a very trifling nature; thirdly, we have an affection of precisely the same nature in men, without any derangement in the generative organs, or, at least, without such derangement as may be viewed as the cause of the nervous symptoms.

The uterus, however, may be, and often is, a source of contamination of the blood. There may be a great drain from the uterus by excessive menstrual flux, which impoverishes the blood; some of the morbid secretions formed at the uterus may re-enter the circulation, and so contaminate the blood: or, again, the ovaries may be defective in their action, and so matters which ought to be separated at each catamenial period may remain in the circulation, and contaminate the blood. In this way the generative organs become a source

of much disturbance to the general nutrition of the body. But, besides all this, there is frequently in hysteria a very imperfect action of the digestive organs, and the liver and kidneys are much deranged; and the moral state into which patients of this kind are apt to fall is very favourable to maintaining this enfeebled state of the digestive function, and of general nutrition.

It is not, therefore, in any degree, an unreasonable view of hysterical delirium to attribute it to a similar or analogous state of the system to that which produces epileptic delirium.

It will not be difficult to apply the same reasoning which has led me to these conclusions respecting the pathology of the epileptic and hysterical delirium, to that of the rheumatic and gouty forms of delirium.

In the latter state the recent researches of Dr. Garrod render it highly probable that in every instance lithic acid exists in the blood in such quantity as to justify our regarding it as "poisoned" by that material, or by some compound of it. What is the nature of the poisonous material in the rheumatic states we have yet to determine; but it cannot be doubted that some analogous matter to that of gout is present in the blood. In both states the aspect of the patients denotes a certain poverty of blood, which is greater in the more advanced stages of the diseases, and which is also more manifest when bleeding, and other active antiphlogistic measures of treatment, have been pursued.

In the case of a robust man, on the third day of rheumatic fever, who had not been bled, and with whom no active antiphlogistic treatment had been adopted, the red particles had fallen to less than 100 in 1000 parts; and, when we consider the pallor of patients in the advanced stages of this disease, it cannot be doubted that its tendency is to impair the regenerating power of the red particles.

If now we add to this, that in rheumatic fever the symptoms of delirium generally occur simultaneously with the lighting up of an inflammation of the heart, we shall be led to compare the sudden appearance of delirium in rheumatic fever, under these circumstances, with the sudden appearance of delirium tremens under the influence of exhaustion.

The effect of inflammation of the heart, more especially when it assumes the form of pericarditis, must be to weaken its power,—to induce a state of imperfect palsy. This, indeed, must be the case, unless we suppose the heart to be exempt from the laws which influence other muscles. We often have proof of this in the

weakened, depressed, intermittent state of pulse which accompanies and betokens the first invasion of pericardial or endocardial inflammation.

Thus we may lay it down that the delirium of rheumatic fever is due to the brain being supplied with an impure blood which tends to derange its nutrition, and that this derangement of nutrition will take place in a more decided manner if the heart be enfeebled, so that the blood is feebly propelled, and the brain is imperfectly supplied. A similar derangement of nutrition affecting the centre of emotion (the region of the corpora quadrigemina) will give rise to those choreic convulsive movements which we know sometimes accompany the first invasion of delirium, or occur independently of it.

The cerebral battery being excited by a thin watery blood, deficient in its colouring matter, and perhaps also in some other of its staminal principles, and which at the same time contains a poisonous element, it is easy to understand how it will exhibit more rapid and active chemical and physical changes; and consequently will develop the nervous force with a rapidity and force which disturbs the mind, exciting repeated and irregular acts of thought, and refusing to be controlled by it.

In gout we have likewise the deranged state of blood, especially in the more aggravated cases—as in the asthenic gout: there is the same poorness of blood, with deficient colouring matter, and the blood is poisoned by lithic acid, or whatever other material it may be which forms the *materies morbi* in this disease; and, although in these cases we have not the acute endocardial or pericardial affections which are apt to occur in rheumatic fever, the heart's power is very apt to be weakened, as if the nutrition of its muscular structure were much enfeebled, or from chronic valvular disease interfering with the circulation through the heart. Intermission of the pulse is a frequent symptom of a gouty state of the system; nor is it by any means a necessary attendant upon valvular disease, but will manifest itself in cases where the valves are perfectly sound. In such cases it would seem to arise from some impairment of the innervation of the heart or of the muscular force of the heart—due, probably, to the depressing influence of the gouty poison.

Thus, then, I would lay it down that in the rheumatic and gouty forms of delirium, the disturbance of the brain's function is due to the depression of the heart's action, caused by inflammation in the one case, and by the depressing influence of the poison of gout in the other. The state of brain which causes delirium in these cases

is a state of irritation arising not from sympathy with the inflammatory irritation of the heart, but, as Dr. Watson and Dr. Burrows express it, from a disturbance of the cerebral circulation occasioned by embarrassment of the heart's action; and I would go farther, and say that not only is it due to an embarrassed action of the heart, but to the circulation with diminished force of an impure and impoverished blood through the brain.

And to the same cause,—namely, an imperfect supply of blood, and an impure and impoverished state of that blood, and to a consequent exalted or depressed polarity of the nervous centres,—would I attribute all the other abnormal nervous phenomena which accompany these rheumatic and gouty affections: the choreic and the tetanic convulsions,—the coma; for such a view is more in accordance with the production of these affections in ordinary chorea and tetanus, and, on this account, more reasonable, than that which assigns them to a peripheral irritation propagated along certain nerves to the nervous centre in which they are implanted, and also because the evidence to prove that such a peripheral irritation really exists in every case, is very imperfect.

It will be remembered that delirium is apt to take place in rheumatic fever, when the internal inflammation is pleurisy or pneumonia, without any cardiac inflammation. Here the element of the embarrassed heart's action is wanting, unless we suppose that a severe pleurisy or pneumonia would embarrass the action of the heart. And again, it occurs when there has only been slight endocarditis, and when there has been no internal inflammation at all. So that we may infer, that the element of embarrassed heart's action is less important in the production of the nervous phenomena than that of an impoverished and poisoned blood.

In the delirium of erysipelas and of typhus fever we have the blood poisoned by the erysipelas or the typhus poison, and impoverished during the period of incubation of the poison, and in many instances by influences deleterious to health existing prior to the reception of the poison, which, doubtless, rendered the patient a more ready prey to its destructive power. Hence, then, the pathology of these forms of delirium must be regarded as essentially the same as that of the others to which I have referred. And the more depressed the patient is at the time of the introduction of the poison, and the poorer the condition of his blood, the more likely will he be to suffer from delirium.

It will readily occur to any one disposed to object to these views of the pathology

of delirium, that the traumatic delirium is not so readily explicable on these principles. What connection, it will be asked, is there between a compound fracture and a poison in the blood? how can a capital operation in surgery develop a poison in the blood?

I think, however, that it may be affirmed that in cases of severe injuries, fractures, burns, and operations, the elements which, in the forms of delirium we have been considering, contribute to the development of the delirious state, are present. Many of the patients who suffer in this way have been free livers, and have their blood more or less contaminated by gouty or rheumatic, or, in younger subjects, by scrofulous matter. Moreover, the shock of the operation, or other injury, the loss of blood, the confinement consequent upon it, the low diet and antiphlogistic treatment which may have been adopted, enfeeble the heart's action and impoverish the blood. It is well known that traumatic delirium is much more apt to occur in persons who had previously been addicted to habits of intemperance, or in persons of damaged constitution and enfeebled health, than in sound and vigorous subjects.

Pathology of coma.—If these views be admitted respecting the pathology of the principal forms of delirium, there will be no difficulty in determining the true pathology of the corresponding forms of coma, excluding the traumatic variety and that from compression.

We exclude these forms, because their cause is clearly local. In the one case the suspensor of the action of the brain is due to the influence of shock on the nervous matter. For a certain time, varying in duration according to the violence of the injury sustained, the vital changes of the brain seem to be suspended: they then recover themselves more or less gradually. A similar phenomenon often occurs in physiological experiments. In pithing a frog, if the operation be done rapidly and roughly the animal remains perfectly motionless for some time, no reflex motion whatever can be excited by any mode of stimulation. The animal lies in this state for a certain time, when its reflex actions return, the paralyzing influence of the shock caused by the division of the spinal cord having passed away.

Again, in the coma from a depressed fracture of the skull, or from an effusion of blood or serum, the cause is clearly local, as is shown by the rapidity with which it passes off when a surgical operation has been successful in elevating the depressed and compressing bone, and by the incurability of the cases where a large intracranial hæmorrhage is the compressing cause.

But in all the other varieties of coma the close analogy of the clinical history points to a close analogy of cause and of pathology: and this is clearly shown in the toxic delirium and coma. A poisonous agent capable of exciting delirium, when administered to a certain extent, will produce coma, if given in a larger dose; and it may be stated that *all* the poisons capable of producing delirium will also cause coma. Take, for example, chloroform: in the early stages of its administration we have delirium; in the later, when more chloroform has been given, coma: so, also, alcohol; so, likewise, opium, stramonium; and the same remark applies to all those agents which exercise a direct action on the brain.

Coma, then, is a higher degree of poisoning than delirium. In the latter case the poison simply irritates, deranges the nutrition of the brain, so as to cause an abnormal and irregular mode of action of that organ. In the former case it paralyzes.

If, now, we admit the humoral nature of the epileptic and hysteric paroxysms, and that the epileptic and hysteric forms of delirium are the result of a disturbed nutrition of the brain by some poisonous matter in the blood, it is clearly highly reasonable to view these forms of coma as but higher degrees of disturbed nutrition from a larger dose or a greater virulence of the poison.

And this reasoning so obviously applies to the rheumatic and gouty coma, that it would be quite superfluous to occupy time with further remarks upon them.

Only admit the humoral view of the various forms of delirium, which I have described, and the explanation of the corresponding varieties of coma follows as a matter of course.

And I must here observe, in concluding my remarks upon the pathology of delirium and coma, that, so far as I know, no explanation has as yet been given of them, so comprehensive and so accordant with the striking analogies in the clinical history of the various forms of those affections, as this, which I may designate the humoral view of the pathology of delirium and coma.

On the Treatment.—I had hoped to have been able to have reviewed the various modes of treatment proposed or adopted for these affections; but the limited space of time allotted to these lectures compels me to confine myself to a very brief reference to one or two important points.

And, first, I would remark that the facts which I have elicited as to the non-inflammatory nature of infinitely the greatest

number of cases of delirium and coma, denote how unnecessary is the antiphlogistic treatment in most of them, and how mischievous it may be in most of them.

And, as to the employment of general or local blood-letting, it is a practice not to be justified by anything in the clinical history or the morbid anatomy of these affections, unless perhaps in the truly inflammatory forms, or where some inflammatory complication may exist. I would here remark, that bleeding tends to the production of that state of blood which is favourable to the development of the comatose or delirious states. It has long been recognised by various observations upon the quantitative analysis of the blood, that bleeding tends to increase the water, to diminish the specific gravity of the serum, and to diminish in a very marked manner the amount of the coloured corpuscles,—to induce, in fact, a state of blood highly favourable to the exosmosis of its fluid parts among the tissues, and which is apt to produce a special variety of delirium and coma (the anæmic), and which, it is reasonable to conclude, would be very apt to increase the intensity of other forms of delirium and coma.

I was anxious to ascertain the effect of repeated bleedings upon the blood in a case where food has been at the same time freely given; and accordingly I tried the following experiments, with the kind and able assistance of my friend Mr. Lionel Beale. A large and well-nourished dog, apparently in perfectly good health, was fed daily on two pounds of meat and a quart of milk. He was bled on four successive days to the extent of six ounces each day, and the blood carefully analysed. The blood drawn in the first bleeding on the 6th of April contained, in a thousand parts, 142·85 corpuscles, 2·42 fibrin, and 783·79 water. That taken by the second bleeding (on the 7th April) exhibited a diminution of the corpuscles to 113·64, and an increase of the water to 810·89, and of the fibrin to 4·72. On the third bleeding (April 8th) the corpuscles had fallen to 110·58, and the water had increased to 815·18, the fibrin being 4·34. And on the fourth bleeding the corpuscles were 106·96, the water 813·04, and the fibrin 3·99.

Thus, notwithstanding the high feeding, the obvious and marked tendency of the withdrawal of blood from the system is to increase the water and diminish the corpuscles, while the fibrin is evidently not reduced, but rather increased.

So much for bleeding. Generally speaking, however, an antiphlogistic system is inapplicable in delirium and in coma. We have ample confirmation of this in the results of experience in delirium tremens.

I believe practical men are now pretty well agreed upon this point. And what applies to delirium tremens applies also to all the forms of delirium. The approach of delirium should be the signal to the practitioner to look to the support of his patient: this is particularly the case in the delirium of rheumatic fever and of gout, and in that of erysipelas and typhus.

I must add one word before I conclude, as to the use of opium. In certain forms of delirium, the cautious and watchful use of this drug is of the utmost value; in others it is attended with danger. It appears to me that in those cases of delirium which have a tendency to pass into coma, opium should be avoided, or used with the greatest caution; whereas in the wakeful delirium it is of great value, and may often be employed very freely, not only with impunity, but also with great benefit. In the epileptic and hysterical delirium, and in that from gout, opium, if used at all, must be employed with great caution. On the other hand, in the delirium of rheumatic fever, and in that of anæmia, in the traumatic delirium, and in delirium tremens, it is invaluable, of course with certain restrictions.

I regret that the time allotted to these lectures obliges me to conclude here my rapid survey of the pathology and treatment of delirium and coma. Much more might be added to what I have said, especially as regards the treatment; but I shall be content if I have succeeded in calling the attention of the profession more particularly to the intrinsic nature of these affections,—a subject which does not appear to me to have received from them all the attention which their importance deserves; and I conclude by thanking you, Mr. President and Gentlemen, for the kind and patient attention with which you have received my remarks during these lectures.

OVARIOTOMY IN THE UNITED STATES.

THIS bold and important operation has lately been performed, with complete success, by that distinguished surgeon, Dr. Alden March, of Albany, N.Y. On the thirty-fourth day after the operation the patient had so far recovered as to be able to undertake a journey of one hundred miles in one day. The cyst, when distended with its fluid, weighed eighteen pounds. About half of the cases which are operated upon, prove fatal; and the doctor, in his paper, says upon the subject, that "if success attends one or two cases it may encourage us to operate too often, when the favourable prospect, to say the least, might be but little encouraging."—*Boston Journal*.

Original Communications.

ON THE
ADMISSION OF AIR INTO THE VEINS.

BY G. F. LANE, ESQ.

*(Read before the Abernethian Society,
Feb. 28th, 1850.)*

My attention was directed to the subject of "air in veins" from having been called to assist at a surgical operation during the course of which the patient became an unfortunate illustration of the effects of even a small quantity of air in the circulation, when suddenly introduced through a wounded vein. Though it would be impossible to determine with anything like accuracy the amount of air which entered, yet, from the small size of the opening, and the strict attention directed to the spot at the time, the quantity must have been very inconsiderable. The sudden accession of symptoms in this case, and the rapidly fatal termination of many others, render it unnecessary for me to allude to the importance of the subject, and at the same time serve in some measure to explain the meagre detail which is evident in cases of this kind, recorded as having occurred in the human subject.

Mrs. Simkiss, æt. 46, a married woman, of light complexion, usually enjoying good health, and mother of eight children; while suckling the last two she suffered pain in her left breast, and, on weaning the youngest six years ago, a small hard lump made its appearance in the axilla, which increased and became so painful that she desired its removal. On the 7th of February, 1848, Mr. Gay performed the operation. The patient was seated in a chair, and rendered insensible by the administration of chloroform. Having divided the integuments across the floor of the axilla, a large glandular mass was brought into view, carefully dissected from the surrounding parts, and excised: three small arteries were tied, and scarcely any blood was lost. At the bottom of the wound there remained a portion of diseased structure, which it was deemed advisable to remove. To effect this, the diseased

tissue was seized with a tenaculum and drawn down: the arm being raised, to allow of its being distinctly seen. In dissecting it out, a tributary branch of the axillary vein was wounded near the chest: the opening was small: air was seen both by Mr. Gay and myself to enter the orifice, accompanied with a peculiar noise sufficiently loud to be audible to all present: the sound being quite characteristic of the entrance of air and fluid through a contracted opening, or of air drawn through fluid,—something between gurgling and hissing, and resembling the sound heard when, in drawing the last portion of a fluid from a vessel into a syringe, some air accompanies it. A great change was immediately noticed in the condition of the patient: the powers of the circulation sank; the woman, who had nearly recovered from the influence of chloroform, (the effect of which had not been kept up as the operation was nearly concluded,) became exceedingly faint and sank down in the chair. Mr. Gay instantly detached the portion of gland he was engaged in removing at the time, and applied pressure above the opening in the wounded vein. The pulse was now imperceptible; the face deadly pale. Brandy was freely given, the wound closed as speedily as possible, the arm brought to the side, and the woman placed in the recumbent posture. The surface of the body became cold, and the patient seemed scarcely to breathe. Ammonia was held to the nostrils; bottles of hot water applied to the feet; the legs and arms were rubbed continuously; the feet and hands immersed in hot water; hot brandy and water poured down the throat in considerable quantities, and subsequently some sulphuric ether. After the lapse of an hour and a half, during which these measures were continued, the pulse at the wrist could be detected beating regularly, and the woman began to regain her consciousness, which she had lost immediately after the entrance of air into the vein. After this she fell into hysterical fits, which soon passed off again, and after two hours she was placed on the bed so far recovered as to admit of a compress being applied, and the arm bandaged to the side; the pulse beating 80 in a minute, regular, but feeble. She was ordered Sp. Am. Aromat. out of Mist. Camphoræ every four hours.

At 7 P.M. (three hours after the operation) she complained of pain and stiffness about the shoulder, doubtless from the tightness of the bandage. Pulse risen to 100.—Ordered ten minims of Battley's Liq. Opii Sedativus at bedtime.

8th (the following day).—The report is that she dozed occasionally during the night, but still complains much of the shoulder. There has been no bleeding besides a little which took place after the application of the bandages, and just sufficient to stiffen them. Tongue furred; pulse 98, regular, of moderate volume; skin rather hot; bowels relieved.—Iced water to be applied to the part, and a draught containing acetate of ammonia and nitrate of potash out of camphor mixture every four hours.

9th.—Dozed frequently during the night, but woke up with pain in the shoulder. Pulse 104, regular and fuller; tongue coated with a brownish white fur, and inclining to dry; bowels again relieved.—Continue the mixture.

10th.—Slept more soundly; pulse 100, soft and full; wound discharging. A slight cough is observed to-day.

11th.—She was seized with sickness last night, followed by rigors, which lasted for two hours. The bandages being removed, the wound is found looking healthy. The ligatures were then removed, strapping applied, and the arm lightly bandaged to the side.—Draught to be continued.

She continued from this time to progress favourably without any bad symptom, and on the 28th of the month the wound had quite healed.

On calling on her recently, with a view of ascertaining whether she had been sensible of anything during the operation, she stated, quite *sua sponte*, that she heard Mr. Gay call for an instrument "to hook down something;" that just before she became insensible "something went 'bubble bubble' under the arm, and shot quite cold across her breast;" and that, just as she "went off, she got quite cold all over," and knew nothing till she recognised me sitting by her side. There has been no return of the disease, and her general health has been better since than before the operation.

A case very similar to the above has

been related by Mr. Bransby Cooper.* While amputating an arm at the shoulder, a peculiar hissing noise was heard, like air escaping from a narrow-necked bottle; and the patient, an emaciated girl, æt. 19, immediately fell into a state of collapse threatening dissolution, during which the following conditions were observed:—The countenance was deadly pale; the pupils fixed, and inobedient to light; pulse small and fluttering, although at intervals regular; respiration hurried, feeble, and at irregular intervals, attended with a deep sigh.—She partially recovered after the lapse of an hour, during which the following remedies were used:—The patient was placed in a horizontal posture; the flap brought over the wound, and held by plaster; cold water was thrown on her face; ammonia held to her nostrils; and a sponge filled with wine to the lips. She quite recovered from this operation, but subsequently died of disease of the spine.

The earliest experiments of injecting air into veins were performed by Wæpfer, upwards of two centuries ago, and after him by Redi, Heyde, Brunner, Morgagni, and others, with the same results. Besides certain symptoms common to each of them, to be presently mentioned, it was ascertained that death occurred most suddenly when the air was injected with rapidity and force; and finding much air mixed with blood in the cavities of the heart, its contractions were supposed by these experiments to be hindered by the distension of its walls, much in the same way as urine prevents the contraction of the bladder in certain cases when accumulated in large quantities within its walls. The first experiments made in this country were by Dr. Langrish,† in 1746: he injected air into the jugular vein—it speedily proved fatal, and after death, finding the right cavities of the heart distended with air and a little frothy blood, and the left collapsed, he believed that death was caused by the resistance which the air afforded to the return of blood through the venæ cavae.

From this period the subject appears to have excited no attention till Bichat published his "*Recherches Physiologiques*," in 1811, in which he made some statements as to the quantity of air re-

* Med.-Chir. Trans. vol. xxvii.

† Physical Experiments on Brutes, 8vo. 1746.

quired to prove fatal, and advanced an opinion that death was caused by the irritation of air in the vessels of the brain. Immediately afterwards, Nysten* published his experiments, showed from them the error into which Bichat had fallen, and was led to the same conclusion to which Morgagni had arrived—viz. that the effects of a large quantity of air injected suddenly into the veins proved fatal, by distending the right cavities of the heart, and preventing their contraction so as to propel the blood through the capillaries of the lungs. Though the experiments of killing animals by injecting air into the circulation bear an ancient date, yet before the commencement of the present century no case is recorded of the entrance of air into a vein during a surgical operation. It was observed on the continent in 1806, by Verrier, whilst bleeding a horse, and in 1818 by M. Beauchêne, in a human subject, at the Hospital St. Antoine, whilst operating on the base of the neck. After the paper of Magendie's, in the *Journal de Physiologie*, in 1821, the question was considered at greater length, and several cases are related as having occurred in different parts, some of which were doubtless unfounded.† In 1839 a sharp discussion was held at the Royal Academy of Medicine, Paris, upon a case related by M. Amussat, in which alarming symptoms of dissolution came on in the course of an operation on the neck, and attributed by him to the entrance of air into a vein. Amongst others, Velpeau was most sceptical of the alleged cause of the symptoms that supervened, grounding his objections on the difference which was manifested in the symptoms produced in experiments upon animals, and similar cases in the human subject. Till 1839, if we except four cases, in which air entered accidentally, its introduction in the various experiments had always been accomplished by injection, but Amussat now first demonstrated its entrance under favourable circumstances during inspiratory efforts. Since the time of Dr. Langrish, the authors who have written upon the subject in this country are Dr. Cormack,‡ Sir C. Bell,§ Mr. Erich-

sen,* and Dr. John Reid.† We propose to examine some of the results to which the experiments alluded to have led; and first, it is a matter of interest to know by what agency air enters certain veins when opened in the living subject, in the region termed by Amussat "*espace dangereuse*."

In expansion of the thorax during inspiration, the blood in the *venæ cavæ* and their tributary branches is accelerated in its course to the right auricle by a species of suction, which admits of simple explanation. The atmospheric pressure on the parietes of the thorax being relieved somewhat by the action of the inspiratory muscles, the ordinary pressure on the vessels without, combined with a tendency to a vacuum around those within, favours the return of blood along the veins immediately emptying into the chest: we should infer that these movements influence the venous current more than the arterial, inasmuch as the walls of the veins being less firm and resisting than those of the arteries, are more susceptible of such agencies, and the contraction of the chest being passive while its expansion is effected by muscular effort; these influences, though not marked in ordinary, are very manifest in forced respiration.

That the systole and diastole of the right auricle exert some influence upon the venous current may be observed in the regurgitation which may be seen, under favourable circumstances, at the base of the neck. It is stated by Magendie,‡ that during dilatation of the right auricle blood is drawn towards that cavity, and that when the auricular dilatation and expansion of the chest take place together, blood flows uninterruptedly along the jugulars, and the auricle is speedily filled. To prove the effect of inspiration on the venous current, Magendie introduced a gum-elastic tube into the jugular vein and superior cava of an animal, even to the auricle, and found that with each expiration alone did blood escape from the extremity of the tube, and with each inspiration air was admitted. By similar experiments he demonstrated a small amount of aid rendered to the arterial current by the respiratory movements: and that the venous current is not only

* *Recherches de Physiologie et de Chimie Pathologique*, 1811.

† See Case, *Leçons Orales de Clinique Chirurgicale*, par M. Velpeau, tome iii.

‡ Prize Thesis, Edinburgh, August 1837;

§ *Practical Essays*, 1841.

* *Edinburgh Med. & Surg. Jour.* vol. lxi. 1844.

† *Physiological Researches*, 1848.

‡ *Précis Élémentaire de Physiologie*, svo. 1817.

influenced by forces acting directly on it, but also through the medium of the arteries; and by appending a hammanometer these forces could be estimated.

It is stated by Poiseuille* that the spontaneous entrance of air into a wounded vein cannot take place further from the walls of the chest than two or three inches—i. e. as far as the venous pulse extends; that beyond this the atmospheric pressure between the opening and the heart is unfavourable to the production of the phenomena: but Blandin is of opinion (and a reference to cases fully confirms it) that certain circumstances exist capable of extending the distances at which air may enter a vein; such, for example, as a tube passed along a vein into the chest, adhesion of the walls of a vein to morbid growths, producing a "canalization" of the vessels said to be favourable to the admission of air: hence the great danger in operating about the base of the neck, from the connection of the veins with the cervical fascia; and not only so, but the co-operative contraction of the platysma myoides, sterno-mastoid, and anterior part of the trapezius during powerful inspiration, must, according to Sir C. Bell, by keeping the cervical veins patent, also favour the entrance of air into them. The comparative emptiness of the vessels after hæmorrhage may account for the greater liability to the occurrence of this accident which is said to exist under these circumstances.

The passage of air as far as the left side of the heart is rare, and does not occur unless a considerable quantity has been injected. Blandin affirms that it is constantly produced when air has been thrown in with rapidity: this statement is open to inquiry, since out of nine experiments made on dogs by Nysten, in which injection was practised, in no instance was air found on the left side, although in the first, fourth, and fifth it was injected with rapidity, and death followed in a few seconds. It is true that of fatal cases which occurred during operations in the hands of Beauchêne, Dupuytren, Delpech, Castara, and Roux, in all it is stated that air was found in the arterial system excepting Delpech's, and a second case of M. Roux, the reports of which are imperfect. Out of thirty-nine experiments

reported by Boulland, in three only was air blown into the jugular vein. The results were as follows:—

In the first it was blown in rapidly, and death occurred in two minutes; in the second it was blown in gently, and death took place in a minute and a half after the operation was over: in both cases pure blood was found on the left side of the heart. In the third instance air was blown in gently, but at two distinct periods, with an interval of three minutes, and frothy blood was found on both sides of the heart. We must except the experiments upon horses, in which the air passes more frequently to the left side of the heart, presumed to be from the larger size of the pulmonary capillaries in that animal.

From the foregoing experiments we see that when air is forcibly driven into the veins it very rarely passes the pulmonary capillaries: this points out at once the seat of obstruction; but the opinion has been entertained that the cause of the weakened pulmonary circulation is to be found in the abnormal condition of the right cavities of the heart; and in support of this the sixth experiment of Nysten may be brought forward, in which, after the injection of fifty-seven centimetres* of air into the jugular vein of a small dog, the animal was restored to life by relieving the right side the heart. As it relates to the proximate cause of death I shall give the case more at length.

At the instant of injection a bruit was audible, resulting from the mixture of air and blood. Some minutes afterwards respiration ceased, the pulse was lost, and death seemed quite apparent. Nysten, then, without thinking to restore the animal to life, but intending to destroy it, cut boldly into the chest, by which the subclavian and some other veins were wounded. A considerable quantity of blood and a little air escaped, the result of which was, to his surprise, that the movements of circulation and respiration were restored; the animal recovered its effects completely; and on the third day, had it not been for the severity of the wounds, there seemed every probability of the animal surviving. At this period it was killed. No air was found in the heart, or vessels, and the lungs were healthy.

* Bulletin de l'Académie de Médecine, tome II. 1837-1838.

* About three cubic inches English.

The time at which death takes place varies considerably in different cases, depending upon the amount and rapidity of injection, and the strength of the animal. From the experiments of Nysten and Cormack, it appears that when air is injected slowly, a considerable quantity may be introduced without proving immediately fatal: in some cases the animals lived a long time, and were then killed; and there is good reason for believing that a small quantity of air may pass into the veins without producing any marked consequences.

The symptoms most commonly produced by the entrance of air into the venous system in the human subject in fatal cases correspond to those of death by anæmia. Immediately after the peculiar gurgling and hissing sound, or "glouglou," has been heard, faintness supervenes, often attended with some expression of approaching dissolution, as "I die!" "I am dead!" or with anxiety and trembling, or without these; syncope rapidly follows, cold sweats break out, and in a quarter of an hour, or in much less time, the patient is dead. In cases of recovery the symptoms first noted are the same; and, after a state of syncope has lasted a longer or shorter period, as the case may be, the patient regains consciousness, and the circulation is found restored.

The symptoms which have been observed in the experiments on animals differ in some respects from those just mentioned: such as a longer interval before the supervention of the symptoms, during which a peculiar churning noise is heard on auscultating the chest; a longer interval between the coming on of the symptoms and the fatal termination of the case, and also in the convulsive movements preceding death in animals. Some authors have laid great stress on this difference; but I think it need not excite much wonder; since the conditions of the two cases are so widely different; and the symptoms observed in the human subject are necessarily imperfect in many cases, from the mental anxiety of the observers, caused by the threatening dissolution of the patient.

A careful examination of the internal organs after death may assist us in some measure in our investigations to determine the mode in which the vital functions are arrested in the cases under

consideration, and will also serve to remove from our minds some of the speculations which have been advanced at different times, and which, but for the negative facts furnished by a careful post-mortem examination, seem very plausible.

In nearly all the cases which have been recorded, great venous congestion has been present. The right cavities of the heart, and especially the auricle, contained air; usually also the pulmonary artery; and in some cases air was observed in the *venæ cavæ*: the right auricle, and in a less degree the ventricle, more or less distended, tense, and elastic, from the presence of air and blood in their cavities, the mixture being in some cases so intimate as to have given rise to the simile of "eggs beaten up for a long time, and coloured." The left side of the heart is in the majority of cases somewhat contracted, containing a small quantity of blood, and rarely any air, except in the horse. In some cases the blood and air present a frothy appearance; yet in others, not to be distinguished from these by the previous symptoms, the air and blood are unmixed in the same cavity. Sometimes the blood is fluid in both auricles and ventricles, and at other times these cavities contain clots. The lungs are observed to be quite healthy. In a few cases a condition resembling emphysema was noted, which, according to Mr. Erichsen, may have been due to the large size of the air cells in dogs, or it may have pre-existed in some horses about to be killed when unfit for other use. These are the more probable, since in the majority of cases reported no emphysema was present, even though air had been injected in many cases with as much force as possible. In all cases in which air has been found on the left side of the heart it has been present in much larger quantities on the right side. The experiments from which these facts are collected are those of Nysten, Amussat, Cormack, and Erichsen.

Instances have been cited by some experimenters in which, on exposing the heart immediately after death, its *right cavities* were found contracted and flabby. Dr. J. Reid suggests that this probably resulted from wounding some large vein in the process, though not mentioned, as it is quite at variance

with the numerous and well-conducted experiments of Nysten and Amussat.

Our object will now be to ascertain, if possible, the *proximate cause of death*; for if we can accurately determine this, we stand in the most favourable position for the successful treatment of cases in which the accident before alluded to has occurred.

The opinions of various observers who have been, I may say, unfortunate enough to witness cases, differ widely. The irritation of air in the vessels of the brain,—the poisonous effects of carbonic acid gas, supposed to be elicited from the venous blood,—the over-distension of the right side of the heart,—obstruction in the pulmonary capillaries,—and a combination of three of these,—are opinions which have been respectively assigned by Bichât, Marchel de Calvi, Nysten, and Bouillaud. Piédagnel believed that death arose from emphysema of the lungs, and Sir C. Bell, that the respiratory movements ceased from destruction of the functions of the medulla oblongata by air circulating in its vessels.

A little consideration will show the incorrectness of the theory of Bichât and Sir C. Bell. In the first place, when Nysten injected quantities of air into the carotid artery, symptoms of apoplexy came on, and death did not occur till after the lapse of some hours. Dr. John Reid also blew air into the carotids in several experiments, and found that it produced convulsions and coma, which lasted some hours before death. In the second place, the air but seldom passes to the left side of the heart. Hence, if it does not reach the brain, its presence in the cerebral vessels cannot be said to destroy the functions of this organ or the medulla.

The same course of experiments affords a refutation of the theory that carbonic acid in the blood is the cause of death. Nysten injected this gas into the vessels, and found the same results follow as when atmospheric air was thrown in, with this difference, that the gas could be found nowhere after death; but that when air was injected into the arterial system in large quantities, it was to be found throughout the vascular system as well as in the cavities of the heart. He ascertained that a small quantity of carbonic acid injected produces no visible effect.

After performing numerous experiments, it is the opinion of Mr. Erichsen

that the heart is not capable of being so distended by air as to arrest its action, unless it be forcibly injected with a powerful instrument; and he questions whether this could of itself arrest the heart's action. The distension of the heart has been compared to that of the urinary bladder; but the analogy will not hold, the conditions being quite different. The bladder becomes distended gradually, and its walls rendered thereby incapable of contracting. The distension of the heart is supposed to be sudden. Furthermore, the effect of suddenly injecting large quantities of fluid into the bladder is to induce powerful contraction. I am disposed to think that the effect of a small quantity of air in the cavity of the heart is to induce at first increased action, whether owing to a spontaneous effort of the heart to get rid of the air, or to its mechanical action on that organ; and this opinion is assumed from noting in Nysten's experiments that the first occurrence observed by him was acceleration of the pulse and hurried respiration. With regard to emphysema, it scarcely needs alluding to. Are we to consider that this can be the cause of death, when it has only been observed in one or two experiments, and these in doubtful cases, and since death occurs with equal rapidity when the lungs are quite healthy?

That some obstruction exists in the lungs, we are warranted in concluding from the fact that in almost all the cases recorded there was fulness of the right side of the heart, and comparative emptiness of the left side; also from the constant presence of air in the right cavities where any was found, and its very rare occurrence in the left. Mr. Erichsen states that arrest to the passage of blood takes place in the capillaries of the lungs in consequence of their becoming obstructed by bubbles of air; the right auricle and ventricle becoming filled with a spumous fluid which they can neither propel forward nor drive back to any material extent, but which, oscillating in the large veins about the heart, acts as a mechanical obstacle to the passage of the blood through them; and that the animal dies as though a ligature were tied around the two cavæ; and we accordingly find after death the same congestion of blood in the venous, and absence of blood in the arterial system, that would result from such an operation.

Whether the impaired action of the heart, when it exists, is primary, and induced by the air in its cavities, or secondary, through disorder of the pulmonary circulation, I must leave for others to determine. An argument in favour of the distended condition of its cavities having some immediate influence in the production of death may be found in the fact that in many cases decided benefit has followed the free escape of blood from the wounded vessel, whether it be mixed with air or not: an experiment of Nysten's, related in the former part of this paper, is a remarkable instance, and other cases might be mentioned.

As the circulation in the lungs becomes more and more impeded, the quantity of blood which reaches the left side of the heart must be diminished; the heart itself is deprived of the necessary amount of blood through the coronary arteries; the nervous centres do not receive sufficient oxygenated blood to maintain their functions, and the respiratory movements cease from an absence of those impressions of sensation which are necessary for the act of respiration. Mr. Erichsen, Dr. John Reid, and, as far as I am able to ascertain, all the others who have written upon this subject, have omitted mentioning an important class of cases in which the symptoms of asphyxia and coma have been most prominently marked by great lividity of the head and face approaching to blackness, convulsive movements; the respiration deep, laboured, and stertorous, and the pulse slow: two cases of this kind are reported by Dr. Warren;* another occurred to Dr. Willis, the full particulars of which I have been unable to find; and a similar case is related by Dr. Cormack.

But the presence of air-bubbles in the capillaries of the lungs, Mr. Erichsen demonstrates by experiment. He took the lungs of a dog recently killed, and found nearly double the propulsive power, ascertained by adjusting a hæmodynamometer, to drive blood through the lungs from the pulmonary artery, when air had been previously blown into the artery, than when the blood was unmixed with air. An experiment, also, of Cormack's, on a similar organ, the liver, shows the effect of air-bubbles in considerable quantities in the ca-

pillaries of that organ. After injecting air into the mesenteric vein of an animal, he found the liver in a condition of almost complete *anæmia*.

I must, then, infer, that obstruction to the blood in the pulmonary capillaries in the majority of instances is the immediate cause of death, and that such obstruction is occasioned by the unnatural admixture of air with the blood; but that in a few instances, where the amount of pulmonary obstruction appears to be inadequate to the production of asphyxia, the symptoms of apoplexy which present themselves lead clearly to the inference that the temporary obstruction about the heart has induced fatal cerebral congestion.

As regards the remedial measures to be adopted in cases in which air has already entered a vein; without waiting for the supervention of symptoms, an immediate indication is to prevent its further entrance; and to effect this object the finger should be placed upon the opening whence the characteristic sound has proceeded, and then pressure applied on the thoracic side of the wound till its closure has been effected. In the further treatment we must be guided in some measure by the symptoms. If the patient becomes much collapsed, the head should be depressed, the patient placed in the horizontal posture, and no time lost in giving brandy freely. Besides the ordinary measures resorted to in cases of syncope, viz. the application of warmth in various ways, frictions, &c., it has been recommended to apply pressure upon the large arterial trunks with a view of diverting blood as much as possible to the brain: should these means not succeed, and the respiratory powers fail, artificial respiration should be used, and kept up for at least half an hour. If, on the other hand, there is lividity of the face, laboured pulse, and stertorous breathing, blood should be abstracted from the external jugular, the effects being carefully watched, and the finger applied below the opening in the vein.

In all operations about the base of the neck and shoulders, where there is possibility of such an accident, it would be well to prevent the forcible expansion of the chest, by bandages applied around it previous to the operation, or at all events pressure should be applied on the side of the wound nearest the heart.

* American Cyclopædia of Practical Medicine and Surgery.

ON THE DEVELOPMENT OF FAT.

BY CHARLES HANDFIELD JONES,

M.B. Cantab. &c.

IN a paper published in the *MEDICAL GAZETTE* more than two years ago, (Jan. 1848) I stated my belief that the presence of a nucleus is not an essential condition in the development of a fat cell, "but that it may arise as a minute vesicle filled with oil, and continue to enlarge by the intussusception of oily matter supplied to it, the envelope expanding and gaining strength in proportion as the contents accumulate." Since then I have made numerous observations on the condition of fat cells, and have by them been led to maintain more exclusively the view I then proposed, so that now I consider it to occur very rarely, if ever, that a fat cell is developed in any other way than that just mentioned. I proceed to detail some of the observations which seem to justify this conclusion.

In the muscular tissue of a sprat I found fatty matter disposed in the following manner. Long rows and groups of oil globules lay between the fibres: they did not appear to possess distinct envelopes, and were occasionally seen fused together: there were also masses of apparently true fat cells, which did not coalesce together, and were not affected by ether. Among those thus treated were numerous vesicles of every size down to $\frac{1}{8000}$ inch, or even less. From the examination of this specimen it seemed certain that here, at least, oil was directly separated from the blood, and that, as it collected into drops of varying size, these became surrounded with an envelope.

In a perch I found a fat mass from the abdomen, consisting of vesicles of very various sizes embedded in a fibrous tissue, which, however, was very delicate and scanty. There was no trace of development cells nor nuclei to be seen anywhere. The vesicles varied in size from $\frac{1}{800}$ to $\frac{1}{4000}$ inch, or less, and, save in respect of magnitude, were all of precisely similar appearance. On ether being added, a good deal of oil was extracted in the form of large drops; but very many vesicles, small as well as large, remained unaltered. I conclude that the small fat vesicles, as well as the larger, are provided with en-

velopes,—that they are not mere oil-drops.

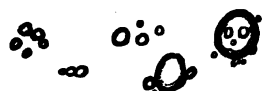
In a piece of adipose tissue from the abdomen of a frog I found no trace of development cells, nor of pre-existing nuclei. The vesicles were of all sizes, from $\frac{1}{800}$ inch to $\frac{1}{4000}$ inch. They were not aggregated together, but lay near each other in a kind of blastematos nidus. They were not altered by ether. I should state that in both this observation and the preceding the animals were rather emaciated than otherwise, but I do not think this materially impairs the evidence they afford, that fat vesicles exist of all sizes, down to a magnitude not exceeding that of an ordinary nucleus.

In a small bird I examined a portion of fat from between the muscles of the thigh immediately under the skin. It consisted of lobular masses, which were in great part made up of vesicles of various size; together with these, and grouped around them in vast numbers, were small oil vesicles, or drops, which were globular and well-defined, and only differed from the larger by their inferior size. They were of all dimensions, from nearly the size of fat cells down to a magnitude almost too minute for measurement.

There was no appearance of the development of fat vesicles from pre-existing cells, or of oil-drops being aggregated around nuclei, but several masses were seen which appeared to consist of oily molecules in process of fusion together.

In the mesentery of a young rook I found several small masses of fat, consisting of vesicles which varied in size from $\frac{1}{1000}$ to $\frac{1}{10000}$ inch. The larger were clustered over with minute ones, and these last were often seen grouping themselves together, as if about to fuse and constitute a larger vesicle. No trace could be discerned of development cells or nuclei. Ether was added, but did not extract any oily matter. The vesicles remained unaltered. I measured one after the addition of this agent, which did not exceed $\frac{1}{8000}$ inch, and there were many similar. Thus these were not mere oil-drops. Acetic acid did not alter the appearance of the vesicles. I remarked that in the situation of a lobule of fat there is a thickening of the membrane (peritoneum), apparently by the deposition of an amorphous or faintly granular blastema.

 A large fat-vesicle from a perch, with smaller ones clustering round it: the diameter of the large one, $\frac{1}{16}$ in.; that of the smallest, $\frac{1}{32000}$.

 Fat-vesicles from mesentery of a young rook: they are of all intervening magnitudes from $\frac{1}{16}$ to $\frac{1}{32000}$ in.

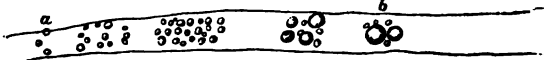
 A mass consisting of minute oil-drops in a state of imperfect fusion together, from a small finch.

 Fat-vesicles from frog, varying in diameter from $\frac{1}{1600}$ in. to $\frac{1}{8000}$ or less.

 $\frac{1}{16000}$ in.
 $\frac{1}{32000}$ in.
 $\frac{1}{16000}$ in.

[Fat-cells from foetal rabbit.

 A small group of minute fat-vesicles from mesentery of foetal rabbit, lying quite isolated: the largest is not more than $\frac{1}{40000}$ in.

 A small vessel from mesentery of mouse, with groups of minute fat-vesicles along its wall, which tend to coalesce and form larger ones: the diameter of the smallest, at *a*, $\frac{1}{32000}$ in.; at *b*, $\frac{1}{16000}$ in.: near to *b*, meshes of ordinary fat-vesicles existed.

This deposit is accurately limited, and does not exist in the interspaces between adjoining lobules. In it, probably the exudation of oil and the development of oil vesicles takes place.

In the mesentery of a mouse, I observed a small vessel with groups of fat vesicles, as I conceive in process of development, lying along its side. Towards the further extremity the groups consisted of comparatively few and small oil drops; as one advanced towards the other end the drops became larger, and presented more decidedly the aspect of oil-filled vesicles, still, however, clustered over with minute drops. Here the conclusion seems quite inevitable, that the fat vesicles, which in parts closely adjacent were of the usual size and form, were developed by aggregation and fusion of oil drops, and the formation of an envelope round them.

In a child, aged only a few weeks, who died of sclerema, in the Hôpital des Enfants Trouves, at Paris, I observed similar appearances in the fat about the capsule of the kidney; minute drops were seen grouping themselves together, but there appeared no trace of pre-existing cells in which the oil-drops should be deposited. I could follow out a regular series from fat vesicles of the ordinary size down to the most minute.

In the mesentery of a human foetus at term, there were several little fat masses visible to the naked eye; in one small

group extending along the side of a vessel, I measured some minute vesicles which did not exceed $\frac{1}{32000}$ th inch in diameter; yet they exhibited a distinct dark edge, and appeared in all respects similar to large ones, $\frac{1}{16000}$ th inch in diameter: none of the vesicles presented any trace of a nucleus.

In a foetal rabbit, near term, I found in the inguinal fold a small quantity of lobulated adipose tissue. The fat cells were small, very few so large as $\frac{1}{16000}$ th inch, and from this size down to the merest points there were seen vesicles or drops of all intervening magnitudes. Often the larger cells were seen clustered over with minute drops which appeared to be about to add themselves to the enlarging vesicle. There was often also a small quantity of semi-oily, semi-granular matter diffused around the cells, which probably constitutes a kind of blastema to them. Pressure on the specimen did not destroy the fat vesicles, or cause oil to exude, so that it seems certain the minute vesicles were not mere drops of oil forced out of the larger. Ether being added, extracted rapidly a large quantity of oil which was seen floating about in great drops: it must have affected large vesicles as well as small, the quantity was so great. When ether was added to a portion of the mesentery of an adult rabbit containing fat, no such effect was produced; the vesicles remained unaltered. There

were no pre-existing development cells in which oil was found, nor did it appear that oily molecules aggregated together around nuclei, but I observed large cells which might have been regarded as containing a nucleus: I convinced myself, however, pretty certainly, that this was not really a nucleus, but a small mass of granular matter on the *outside* of the true vesicle, but contained with it in a kind of accidental envelope.

I have examined several times fat vesicles taken from persons who died in a state of very great emaciation, but the results of these observations have differed a good deal.

Sometimes there appeared to be no envelope, but the oil-drop diminished in size was surrounded by a small quantity of granular matter. Sometimes the envelope was distinct, and the cavity contained only a very small oil drop with some faint amorphous matter and transparent fluid: sometimes in the half-emptied vesicle there were traces of a nucleus more or less distinct: this last circumstance I mention as being of some importance, though I do not feel absolutely certain as to the correctness of the observation.

On considering the evidence now brought forward, I think, if it be accepted, it can scarcely remain doubtful that the fat vesicles are ordinarily developed without pre-existing cells or nuclei: the process seems to consist in the gradual separation of oil from the blood, or rather from the exuded liquor sanguinis, whereby oil-drops are formed, at first minute, afterwards enlarging both by addition and coalescence, and soon becoming enclosed in an envelope of proteine material. This envelope is at first very feeble, perhaps scarcely organized, but afterwards acquires considerable strength, and sometimes persists after the absorption of the oily contents. The original imperfect state of the envelope is well shown by the different effect of ether on the adipose tissue in the foetus and in the adult, the oil in the one case being rapidly extracted from the vesicles; in the other little, if at all. The formation of the envelope appears to be the only act of organizing power that takes place in fat, the only circumstance that entitles it to rank as a tissue; in some fishes probably the fat is in great measure merely so much

exuded oil lying in the interstices of the tissues, and does not become truly organized.

Whether a nucleus is at some time formed in the fat vesicles or not, I do not know: if this should occasionally be the case it would show that the vesicles had attained a higher degree of organization, becoming thus true nucleated cells.

In conclusion, I wish to draw attention to a circumstance which I have already dwelt upon in the paper before referred to—viz., that in two instances, that of the adipose tissue and that of the pulmonary aerating surface, where the secretion product is of a very simple nature, and certainly pre-exists in the blood, the analogues of the epithelium of glands are absent or very slightly developed. This points unequivocally to the importance of the epithelium in the process of secretion; a fact which at the present day is trite and common, but which our advancing chemical knowledge seems to render only less easy of explanation.

The constituent principles of the secretions, it seems most probable, pre-exist in the blood, and can be formed without the glands, as shown in the experiments of extirpation and in the results of disease; yet the glands possess a peculiar structure which seems to be developed very much in proportion to the complex character of the secretion, and which in many of the lower animals is seen to contain the elaborated product, while in the higher classes it seems to be chiefly or entirely an albuminous substance, and does not evidently contain the secretion. The great difficulty seems to be to understand why the epithelium should be in so great a degree an albuminous substance. If the growing cells extracted from the blood merely or chiefly the constituents of the secretion, as they often seem to do in the lower animals, the process, though essentially mysterious in its nature, would in its stages be clear; or, if we did not find the secretions formed in the blood, it might be assumed, without much risk of error, that the albuminous epithelium underwent a chemical decomposition, breaking up into the constituents of the secretion, and a complementary material, which returned to the blood: but to explain how the epithelial cells, with-

drawing from the blood little else than albumen for their own formation, are yet so essentially concerned in the elimination of the more complex secretions, is a great enigma. It may be one day solved, and all the apparent contradictions and differences shown to be dependent on some great general law; but from this we are far at present; and, in default of any simpler arrangement, we must, I believe, recognise the following diverse conditions of the secretory process:—

1. Secretions pre-existing in the blood removed from it in an almost purely physical manner—*as.* oil, carbonic acid.

2. Secretions pre-existing in the blood in a more or less perfect state, but requiring under ordinary circumstances a peculiar epithelial apparatus for their removal—*as.* the principles of the urine, bile, saliva, &c.

3. Secretions which do not pre-exist in the blood, and which appear to be formed by the action of gland-cells—*as.* semen, gastric juice, mucus, pigmentum nigrum.

TREATMENT OF HÆMORRHAGE FROM THE UMBILICUS. BY DR. BOWDITCH.

THE treatment of umbilical hæmorrhage must vary with the class. In relation to the *first class*, viz. that in which there is bleeding from the cord, owing to its contraction and the subsequent loosening of the ligature, it may be remarked that bleeding will rarely happen if the practitioner, at the time of labour, takes sufficient precautions. He should always, before leaving the room, examine the cord a second, and if need be a third time; and if it has been large, and seems disposed to contract, so as to allow of any cooing, a new ligature should be applied.

In the *second class*, where injury is produced by the violent removal of the cord, use should be made of caustic; or, still better, of plaster of Paris poured in a liquid state on the part, so that a plug will be formed, on its becoming hard, in all the minutest crevices, and even in the mouths of the bleeding vessel. This should be retained for three or four days, and success will probably be the result.

In the *third class* it will be difficult to decide whether the bleeding is owing to the open mouths of deep-seated vessels, or to an original hæmorrhagic tendency. If, however, there be no hereditary tendency, and if there be no marks of hepatic lesion,

we may use styptics of various kinds: tannin, collodion, sulphate of zinc, sulphate of copper, and caustics. The best treatment, however, would undoubtedly be that advised by Dr. Radford, of Dublin, namely, to cut down and tie up the bleeding mouths. In order to do this we should endeavour to decide from which the hæmorrhage proceeds, so as to prevent the necessity of too much cutting.

In the *fourth class*, where hæmorrhage from the umbilicus, without evident cause, takes place, which can be only partially restrained by astringents, and in which there is hepatic lesion, I believe that very little hope may be anticipated of affording relief. At times, however, a slight oozing may continue for months, and the patient finally get well. But this is uncommon. In our cases all astringents and caustic compresses seemed rather to stimulate than diminish the hæmorrhage. Even the plaster of Paris, and ligature, and actual cautery, are of no avail. The oozing, checked for a while, returns until death. Some have advised internal remedies in these cases, with the idea of correcting the fluidity of the blood. For that purpose I used sulph. soda, as recommended in the *British and Foreign Medical Review*, ix. 247. If, however, Simon's view is correct, that icteric blood, while it possesses less fibrin, has more salts and albumen than usual, we should not use sulphate of soda in cases where icterus is found. Transfusion has been suggested; and I regret that it was not tried in our cases: but the older surgeons had no faith in the remedy, and the younger preferred not to use it. To me it seemed the only means left for preserving life.

In the *fifth class*, where there is a natural predisposition to hæmorrhage, what can be done? If the same applications may be made to the child as those made to the adult, the actual cautery is undoubtedly the best styptic. The late Dr. Hale, of this city, used to relate to me the case of a man who always carried a nail in his pocket, in order that he might cauterize any part of his body that was bleeding. But our cases prove but little in favour of this method. The cautery did not, in fact, check the hæmorrhage one hour. Transfusion I should have less faith in than in the previous case. A question arises, whether the mother should nurse the child. I think not; still, when we bear in mind the fact that, in many cases, the hæmorrhagic tendency does not show itself in the mother, but in the grandparents, we can hope but little from a strange nurse.—*American Journal of Medical Sciences*, Jan. 1850.

MEDICAL GAZETTE.

FRIDAY, MAY 31, 1850.

WE elsewhere* insert a short abstract of some legal proceedings which have recently taken place, with the obvious design of overthrowing the jurisdiction of County Courts in reference to evasions of the Apothecaries' Act. We have more than once expressed our opinion that there should be a summary process of dealing with unlicensed pretenders, and the County Courts Act has supplied a cheap and ready method of bringing the powers possessed by the Apothecaries' Society into operation. But our readers are aware that the jurisdiction of these courts is limited to actions for penalties under twenty pounds; and, as this penalty is incurred by *each* act of practice, it was contended in the case referred to, that as there was proof of an infringement of the act at four different places and on four different occasions, the penalties had thus accumulated to eighty pounds; and it was therefore a case which could not be brought before a County Court. This ingenious piece of special pleading was, however, summarily overruled, as it was obvious, from the form of the plaint, that the plaintiffs relied only for the recovery of twenty pounds on any *one* of the four cases there specified. This decision is quite consistent with common sense; for had a contrary view been taken, a man had only to commit *two* offences under the act instead of *one*, and he would thereby have virtually placed himself beyond the power of the law.

In approving of this employment of the County Courts Act for the purpose of suppressing illegal practice, it will be understood that our remarks apply

to those cases in which the public are likely to suffer from the practice of ignorant and unskilful pretenders. If a man have received a proper medical education, and be possessed of a Scotch or Irish diploma, or license, a resort to this act, for the purpose of removing him from a neighbourhood, would be a most unjust proceeding. We have reason to believe, however, that the Society of Apothecaries do not lend themselves to this method of creating for their licentiates, a monopoly of practice in England and Wales.

MEDICAL legislation makes no progress. An application has been made by the College of Surgeons for a new charter, but its terms have not been yet agreed upon; and SIR GEORGE GREY has plainly intimated that it is not the intention of Government to take the initiative in the matter. It is quite certain that no new charter will be granted to the College until its provisions have been submitted to the judgment of the profession; and it is probable that ample time for this judgment will be afforded during the recess.

We fear that unless the example of the Gloucestershire Medical Association be generally imitated by other provincial associations, we shall be no nearer to medical legislation in May 1851 than we are at present. We published in a recent number the resolutions of this Association.* The *first* is well deserving of the attention of all who are desirous of having the long-agitated question of medical reform brought to a settlement. It is there shown in a few sentences that the recent resolutions of the College of Surgeons, if carried out by a legislative measure, will effect some material improvements in the profession. To those who look to a separate incorporation as a panacea for all pro-

* Page 960.

* MEDICAL GAZETTE, May 17, p. 875.

fessional complaints, and to another class, who delight in hugging grievances, and in keeping the profession in a state of chronic exasperation, the conciliatory step taken by the Gloucestershire Association will prove unsatisfactory. Two questions, however, should bring the wavering to a decision:—1. Will not the concessions proposed to be made, and set forth in the first resolution of the Gloucestershire Association, be a great improvement on the present anomalous state of the profession? Is it consistent with experience that men should obtain at once from corporate or legislative bodies *all* that they desire? A reform which is intended to be beneficial and lasting, should, in our judgment, be progressive. To us it appears by no means improbable that if the powers now proposed to be conceded be properly exercised, other advances will hereafter be made by the Colleges to meet the reasonable wishes of a majority of their members.

All who dissent from the views of the Gloucestershire Association must remember that the Home minister has it in his power to turn the arguments of the dissentients against themselves. Who can say what are the real wishes of the majority of the profession, when memorials and addresses of so conflicting a kind are placed in his hands? From the most recent of these documents, issued by the National Institute of Medicine, elsewhere inserted,* it would appear that the memorialists set no value on the views of the members of the Provincial Medical and Surgical Association, on the ground that the meetings at which the resolutions were carried were attended by comparatively few practitioners. We take it that all had notice of the meetings, and the opportunity of attending them if they pleased; and we know of no other way in which the opinions of large numbers could be

more fairly collected. It would be a strange view of our national polity, if any set of persons judged of the force and value of acts of Parliament by reckoning up the exact number of members who happened to constitute the House of Commons when a measure was brought forward and passed. If the foundation of an independent College of General Practitioners were voted in a house of fifty members, would these gentlemen object to receive and profit by the legislative act merely because 608 Members of Parliament were absent on the occasion, and the votes of fifty could not be taken as the voice of the nation? We believe that they would be guilty of nothing so romantic. They would accept the boon as the free and independent gift of the whole house, and of the country. Let them not, then, object to the provincial meetings because they were, as they allege, attended by comparatively few. As professional men, they must know that the collection of many country practitioners from different and distant quarters is always a matter of difficulty. Their own periodical meetings prove it. Their most recent meeting, as we are informed, was certainly not attended by more than 700 persons; yet we have shown that, at the least, there are 10,947 members of the medical profession now practising in England and Wales.* How, then, can they assert "that a new and independent College is the deliberate and most anxious desire of a *vast majority* of the general practitioners in town and country?" Sir George Grey will require figures as well as assertions. What is this *vast majority*, and how, and in what manner, has its existence been determined? We acquit those who drew up this document of any attempt at equivocation; but the term "general practitioner" is really so ambiguous, that we do not know

* Page 961.

* MEDICAL GAZETTE, p. 867.

whether the memorialists refer to men with a double or single qualification, or with any qualification at all. As we have printed the numbers holding all possible qualifications, and practising in England and Wales,* it will be very easy to compare their alleged numerical majority with the total, or with any part. We contend, however, that there must be no restriction on the voice of the profession in this matter. A new medical college, with new rights and privileges, concerns *all* men now engaged in practice who have received a medical education, and who are possessed of a diploma or license. It must not be confined to any special class known as general practitioners alone: and, if we mistake not, this will be the view taken by the Government in endeavouring to consult the wishes of the profession.

We here, for the present, leave the subject. It is probable that there will be a memorial and a counter-memorial per week until the recess, or until the patience of Sir George Grey is utterly exhausted.

In our next number we shall commence the publication of the valuable *Course of Lectures on Inflammation*, recently delivered by PROFESSOR PAGET at the Royal College of Surgeons. To those who had, as well as to those who had not the opportunity of attending those lectures, their publication at the present time will, we doubt not, prove most acceptable. As they were delivered in the short period of two weeks, and are highly suggestive of new and important views in pathology, those of our readers who heard them will now have an opportunity of making themselves more fully acquainted with the subject. There are six lectures in the course, and one will appear weekly until the course

is completed. They will be prepared for exclusive publication in this journal, under the superintendence of Professor Paget.

DR. WINSLOW'S CHART OF THE LUNACY ACT.

DR. FORBES WINSLOW has just published a most useful synopsis of the Lunacy Act, in the form of a chart mounted on rollers. We subjoin the following description, which is strictly correct:—

"It embodies a careful abridgment, analysis, simplification, and arrangement of the act of Parliament (8 and 9 Vict. cap. 100), having special reference to the internal management of lunatic asylums, and the care and treatment of the insane. As the statute in question is essentially one of '*pains and penalties*,' subjecting parties infringing any of its provisions to serious actions for misdemeanour, it becomes imperative upon those who are brought within its jurisdiction to make themselves intimately acquainted with its provisions. The Lunatic Act is not confined in its operation to parties connected with licensed asylums for the insane. It has particular reference to persons having *one patient* residing with them, and to all parties confined in unlicensed houses on the plea of insanity. It is also necessary that persons signing certificates of lunacy, and parties transferring friends or relatives to licensed or unlicensed houses, should be conversant with the clauses of the act of Parliament having reference to this point. The synopsis is arranged in the following order:—

- "1. Qualifications and functions of the *Masters in Lunacy*.
- "2. Qualifications and functions of the *Commissioners in Lunacy*.
- "3. The law in reference to licenses granted to asylums.
- "4. The law in reference to the general management of asylums.
- "5. The law in reference to admissions, escapes, deaths, and discharges of patients.
- "6. Visitation of Commissioners.
- "7. Single patients confined in unlicensed houses.
- "8. Ill-treatment and unjust confinement of patients."

We have examined this chart, and it is our opinion that it will be a most serviceable guide for all medical practitioners concerned in the treatment or confinement of lunatics.

LECTURES
ON
LACTATION, AND THE DISORDERS
INCIDENT TO THE PUERPERAL
STATE.

By E. W. MURPHY, M.D.

Professor of Midwifery, &c. in University
College, London.

LECTURE XVIII.

Symptoms of the most intense form of puerperal fever, chiefly those of the second stage or stage of collapse—Symptoms when the disease is less intense, the most prominent being those of peritonitis—Symptoms of erysipelas or diffused inflammation—Diseases modified by puerperal fever—Gastro-enteric fever—Erysipelas—Puerperal mania—Classification—The puerperal disease—Erysipelas and puerperoid diseases—Pathological appearances in the more intense forms—venous congestion—serous effusion—sero-purulent effusion—fibrinous depositions—Less intense forms—sero-purulent effusions, with adhesive lymph—Softening of tissues—of the peritoneum—of the uterus and ovaries—of the liver and spleen—Morbid alterations from erysipelas—slough of mucous membranes—depositions of pus in the veins—in the substance of the uterus—in the ovaries—in the inter-muscular cellular tissue—the joints—the orbit—the sub-peritoneal reticulate cellular tissue.

GENTLEMEN,—In tracing the history of the malignant disease that has been the object of our attention, some account of its symptoms and its effects upon the constitution was unavoidable. A brief outline, also, of the treatment adopted by the different distinguished physicians who have given us their experience of it, was also necessary: nevertheless, at the risk of repetition, we must enumerate more precisely the symptoms of this disease, and the morbid changes it produces, in order to determine, if possible, what puerperal fever is, and especially to decide upon what principle we should conduct our treatment. Hitherto we have spoken of puerperal fever in the singular number: the term "fever" has been used in preference to "inflammation." In both respects we are conscious of assuming the truth of questions in dispute: we shall have to return to these propositions, and to discuss whether this disorder be one fever or many fevers, or, in fact, whether it be a fever at all; but at present, in order to define the disease we

mean, we must describe to you its character.

The symptoms, then, of puerperal fever are observed to commence generally about forty-eight hours after delivery; sometimes they appear within twenty-four hours, and cases have been recorded in which they have been observed even before delivery. The manner in which it attacks the constitution varies exceedingly; but when the disorder takes sufficient time to develop its true characters, a *rigor* is first observed, sometimes only slight, more usually distinct and severe; this may or may not be followed by perspiration, but is always succeeded by a sense of oppression at the præcordia, and peculiar expressions of alarm, depondency, and suffering, that unite in forming a very characteristic feature of the malady: vomiting generally takes place, and what is discharged is often very offensive: the skin is dry and hot, but in more aggravated cases the surface, and especially the extremities, are cold; the pulse ranges from 120 to 140 beats, it may be wiry and resisting, but much more commonly is soft, small, and compressible. Simultaneous with, or subsequent to the rigor, pains in the abdomen are complained of: their seat is referred to the uterus or its neighbourhood, over which the patient cannot bear the least pressure; the uterus itself is often enlarged, and hence the reason why these pains have been so often confounded with after-pains, and much valuable time consequently lost. Sometimes, however, the pain commences in the epigastrium, and the patient experiences great distress from violent shooting spasms through the scrobiculus cordis and lower ribs. These pains are soon followed by a general distension of the abdomen, and a diffused tenderness over the surface, often so acute that the slightest pressure causes intolerable anguish; the patient cannot bear the weight of the bed-clothes, nor can she respire without agony: *respiration* becomes, therefore, quick and short, each inspiration being interrupted by the epigastric pains, and maintaining no correspondence with the pulse; hence the patient seeks by position to relieve her distress—she lies on her back, the head and thorax raised on pillows, the legs drawn up, and the hands folded on the breast, feebly endeavouring to support the bed-clothes; a short cough frequently terminates the inspiration. A *diarrhæa* may occur at this stage, the evacuations being dark, frothy, and very offensive. This is rather a favourable indication than otherwise. The tongue is usually moist, having a curdy whiteness in the centre, or a yellowish fur like cream; a red line may sometimes be observed running down the centre, but is

often absent: there is generally great thirst, the drink often thrown back as it is swallowed. The patient may complain of *headache*, having a dull pain over the eyebrows; but the intellect is clear, and she is very observant of your countenance and movements in investigating her symptoms. The countenance is pallid, having a slight lividity around the sunken eyes and angles of the mouth; occasionally a hectic flush, or a more defined crimson patch, will appear. I have not observed much alteration in the *lochia*; in some instances it was suppressed at first, and returned again; in others, continued as before. The secretion of *milk* is usually arrested, although there are many exceptions. These symptoms mark the first stage of the disease; they are the evidences of the struggle of the constitution to resist the attack; they may continue twenty-four or forty-eight hours, when they are succeeded by those that proclaim defeat. The symptoms that indicate the failing powers of life to continue the contest form the second stage. The surface and extremities become cold, the countenance more livid, the tongue perhaps clean, the pulse 160, small and feeble, but sometimes full, soft, and very compressible. The tenderness and tension of the abdomen diminish, and in some instances are quite removed; vomiting takes place without effort, a green stream often flowing from the mouth, and may be accompanied by a diarrhoea of a similar character: the intellect remains clear to the last, and the relief which the patient experiences from her previous sufferings, which she naturally attributes to the treatment, often excites a belief in her safety when she is actually within the grasp of death. A clammy and offensive perspiration bursts out, partially on the surface; respiration becomes gradually less hurried, and death closes the scene.

Such are the characters of the fever which came under my own notice, and the description agrees with that given by Hulme, Leake, J. Clarke, Armstrong, Mackintosh, Lee, and Copland. We may fairly assume, therefore, that all are speaking of one and the same disease,—one that the majority of these writers confess to be different from the puerperal affections that they were in the habit of observing.

There are many causes which modify the intensity of the disorder: the power of the constitution to resist the attack varies, but independently of other causes the time that the patient is seized seems to exert an important influence. As far as my observation has given me the opportunity of forming an opinion, the first incursion of the fever seems to be the most violent: its intensity is then at its maximum, and di-

minishes with its progress. The patients who were first attacked presented comparatively few symptoms of the first stage; they merged at once into the stage of depression: while those affected at a later period exhibited the symptoms of the first stage only, and in a milder form. Thus two classes of cases were observed, deviating from that described into opposite extremes; the one presented symptoms of collapse throughout: the countenance pallid and almost livid; the eye dull and glassy; the surface cold; the tongue clean, moist, and cooler than usual; the abdomen either tympanitic or only tumid, and in either case generally free from pain; the pulse was very rapid, 150, 160, 180, but in one instance it was as low as 90; respiration oppressed and hurried from the commencement of the attack, which usually began with twitches in the sides and epigastrium; vomiting and diarrhoea sometimes took place, but the contents of the stomach and intestines were discharged without effort: a clammy offensive sweat broke out partially over the surface, and the patient sunk in 24, 36, or 48 hours. These cases are analogous to Armstrong's "congestive disease," to Mackintosh's "intense peritonitis;" and presented characters which impressed Dr. Collins and myself so strongly with its resemblance to Asiatic cholera. The other class exhibited symptoms which the history of a single case will sufficiently illustrate. A small delicate-looking woman was delivered in the Dublin Lying-in Hospital of her second child, after two hours' labour. She was in the ward first attacked by the fever, in which two women had just been seized, and both died within 48 hours. She had the usual rigor, followed by pains shooting through the sides and back into the abdomen; there was some inclination to vomit; the bowels were free; the abdomen tumid rather than tympanitic; the *lochia* natural; the countenance was slightly sharpened; the tongue moist and white; the pulse 104, rather soft. Two dozen leeches were applied to the abdomen, followed by the warm bath, and calomel, with ipecacuan, two grains each, were given every second hour. A profuse diaphoresis broke out during the day, followed by a diarrhoea, which continued during the night, several green and frothy evacuations having passed; the next day the tenderness of the abdomen was removed; the gums became spongy; the pulse 100. On the following night she was again bathed in a copious perspiration during her sleep, which was not disturbed. From this time the symptoms gradually disappeared, and she was dismissed well in about three weeks.

In point of time this case is an exception

to the observations we have made, because it occurred when the fever first appeared, and was committing its ravages to a fearful extent; but as an exception it rather proves the rule, because at this period it stood alone amid a vast preponderance of fatal cases: as time passed on, such examples were more frequent, and became numerous towards the conclusion of the epidemic. These latter cases also presented another remarkable difference from those first attacked: the symptoms in both were, or at least appeared to be, equally intense, but the early cases generally died, while those occurring later, although apparently similar, often recovered. We can only consider these varieties of puerperal fever as differences in degree, but not in any essential characters: they are grades of the same disease varying in intensity, but in nothing else.

We have mentioned to you that erysipelas accompanied puerperal fever; and thus, in the garb of erysipelas, this pestilence frequently assumed another and an equally fatal form, presenting a different group of symptoms from those we have described. The symptoms of erysipelas also commence with rigors, which return irregularly, and are followed by headache more or less severe; the pulse varies from 100 to 140, and is often soft and vibrating; the tongue is covered by a thick creamy fur that soon grows dry in the centre, and, as the disease advances, becomes brown; the gums are covered with sordes; the surface is dry, hot, and yellow; the countenance shrunk and jaundiced; the expression perfectly listless; the abdomen is often quite free from pain, soft, and not distended; in other instances pain is produced by slight pressure over the uterus, and especially the ovaries: this pain also shifts its position. Again, there are cases in which the abdomen becomes suddenly distended and very painful: vomiting sometimes takes place; diarrhoea is generally present; the lochia may be suppressed, but often is not interrupted; the milk is not secreted. The patient begins to wander, is excited, and delirium follows,—violent, perhaps, at first, but soon subsiding into a low muttering. She lies perfectly prostrate: twitchings through the voluntary muscles, and coma, precede death.

In the progress of these symptoms, local inflammation frequently takes place, having its seat in the buttock, the joints, the cellular tissue of the orbit or of the extremities: diffused inflammation, with extensive suppuration, has been observed in all these situations. Nor is it confined to the external surface: the internal organs often present similar morbid changes; thus the lungs, the liver, the spleen, the kidney,

even the heart, and constantly the uterus and ovaries, have been the seat of purulent deposits.

The group of symptoms that depend upon disturbance of the nervous function form the most remarkable feature in this malady, as distinguishing it from that which we have previously described. The muttering delirium and subultus tendinum observed here are not present in the former disease: the frequent absence of abdominal pain, and its fluctuating character when present, are also worthy of attention.

We shall not now stop to inquire whether erysipelas, as it thus manifests itself, and puerperal fever, are one and the same disease. We prefer, for the present, that you should consider them distinct disorders: but, as a connecting link between them, and in order to trace their relationship, we shall direct your attention to that form of attack described by Drs. Gooch and Ferguson: the second variety of peritoneal fever of Gooch; a variety of the first form of puerperal fever of Ferguson,—one in which the abdominal pain is transient as contrasted with that where it is permanent. "Of two patients attacked by abdominal pain," says Dr. Ferguson, "it will in the majority of cases, and at the commencement of an epidemic, be very difficult to ascertain which is the slighter, which the severer malady. In both, the intensity of anguish—the seat of pain included between the pubes and a line drawn from the superior crest of one ileum to that of the other—the precursory rigor, followed by the hot fit—the time of attack, from the first to the fifth day after parturition—are all the same, and neither the pulse nor the degree of fever distinguish the one from the other. The action of remedies, however, shows their distinctive characters: the transitory form being readily relieved by such agents as lull pain; while the other requires such as are used to quell pure inflammatory action. The transient abdominal pain passes into the second or permanent kind; but in some epidemics it forms the principal character of the common malady, and I have never seen one in which some of these did not occur."* Dr. Gooch details cases in every respect similar, exhibiting intense pain of the abdomen, which was quite tympanitic, a rapid pulse, hurried breathing, some vomiting, and great anxiety,—relieved by opium and fomentations; injured by depletion and purgatives: and in which, after death, the peritoneum was found quite natural, without serous or sero-purulent effusion, without adhesion or any of the usual indications of inflammation. Is this erysipelas of the

* Ferguson's Essays, p. 11.

peritoneum?—the traces of inflammation disappearing after death just as the blush of erysipelas leaves the integument; or is it erysipelas of the mucous surface of the intestines, causing flatulent distension of the abdomen, and the distressing anguish of colic? If treatment be a test of the character of a disorder,—and we think it a good one,—the treatment recommended by Gooch and Ferguson for this affection is that which is the best suited for erysipelas, and most assuredly one that is quite unavailing in the disease which we have described as puerperal fever. The post-mortem appearances also indicate an essential difference, to which we shall have again to refer.

The presence of an epidemic aggravates every form of disease that comes within the sphere of its influence, however remote that affection may be from the essential characters of the epidemic itself. When typhus fever is present, every form of fever assumes a typhoid character. When cholera made its appearance, every irritation of the intestines was disguised by symptoms resembling cholera; and thus we find that the presence of puerperal fever aggravates considerably the danger of affections that, if it be absent, are seldom fatal, just as the presence of erysipelas gives an unhealthy aspect to the most trifling inflammation or the slightest sore. Such seems to me to be the effect of puerperal fever on some disorders that are met with, and at other times are usually curable. One of these is the *gastro-intestinal fever* already briefly alluded to. When a case of gastro-intestinal fever occurs in the epidemic season, it presents very different characters from what is usually observed: it assumes a typhoid form, and, although more within the reach of treatment, it is sometimes as dangerous as puerperal fever itself. This disease lasts from a week to fourteen or to twenty-one days: the prevailing constitutional symptoms are less of a puerperoid and more of a typhoid type. The symptoms commence with a rigor, followed by a transient peritoneal tenderness that seldom lasts, and is always easily removed by moderate local depletion; the pulse is quick, the tongue furred in the centre, and red at the margins and tip. It afterwards grows dry and brown, as in typhus. The skin is dry, hot, and of a dirty sallow colour. There is generally nausea, sometimes vomiting, and always diarrhoea, which is excited by the least irritating substances. The evacuations are exceedingly offensive, and dark-coloured. There is great irritability, and occasionally slight delirium, with considerable prostration and tremors through the limbs. The patient gets little rest, being disturbed by hallucinations. This fever, when fatal, ge-

nerally merges into typhus, but its more usual course is to assume a remittent form, the exacerbations coming on generally in the evening. It is this disease which has been described by Dr. Butter (1776) as “the remittent form of puerperal fever,” and is Dr. Ferguson’s “second form of puerperal fever, with gastro-enteric irritation.”

Puerperal mania is another disorder that may be similarly modified. On the same day that a case of typhus fever was admitted into the Dublin Lying-in Hospital, and about ten days before puerperal fever broke out, a case of puerperal mania occurred which presented the following symptoms. On the fourth day after her labour, which occupied about fifteen hours, nothing unusual taking place, she was observed to be extremely nervous and irritable. She complained of no local pain, but was seized, in the course of the day, with dyspnoea, accompanied by a severe pain in her chest. Pulse 120. She was bled, and given tartaremetic. The blood was not buffed; vomiting was very easily excited; a fetid enema readily acted on the bowels, which discharged a large quantity of flatus. The following night she slept well; in the morning complained of some pain at the epigastrium, and was restless. The restlessness increased during the day, so that she constantly tossed herself about the bed, and was with difficulty prevented from getting up. That night she had no sleep, became quite delirious, but still, when asked a question, answered collectedly. The pulse rose to 160, respiration becoming quick and irregular, the cheeks being occasionally puffed out; the evacuations from the bowels were more frequent, dark, and offensive, of the consistence of gruel. She had also some vomiting. Tenderness of the abdomen was now first perceived, and in the evening it became suddenly quite distended. From this time the change was remarkable. The extremities were cold and clammy; the face collapsed, covered with a greasy perspiration; the pulse almost indistinct; delirium still continued; she was more restless, constantly talking, and making feeble efforts to leave her bed: vomiting returned, what was ejected being quite grumous and offensive. After this she gradually sunk, and died on the third day, about sixty hours from the commencement of the attack. The post-mortem inspection showed in the abdomen the usual sero-purulent effusion of puerperal fever, but along with it there was great congestion of the vessels of the brain; some effusion into the arachnoid, which was in some parts of a pearly whiteness. This case, therefore, admitted of two interpretations. It was either a case of puerperal fever, the arachnoid being first engaged, the peritoneum

subsequently; or it was a case of puerperal mania, modified and rendered fatal in consequence of the epidemic that was then approaching. I am inclined to adopt the latter opinion, because the attack of puerperal fever did not commence until ten days afterwards, and during its progress no similar case was observed, which would be very unlikely if this first case was to be considered an example of that epidemic. In its characters it bears a close analogy to Dr. Ferguson's "third or nervous form of puerperal fever,"—a form that he admits is "by far the most rare of all the various kinds of puerperal fever. . . . Those (says Dr. Ferguson) in whom the nervous character is the sole, or at least the most prominent part of puerperal fever, exhibit all its symptoms in all its irregularity and inconstancy. There is painful and sudden abdominal tenderness, which subsides with extreme rapidity. There is a rapid pulse, great restlessness, and mental uncertainty and agitation, together with shifting functional disturbance of various organs; sighing, tremors, cramps, sudden and death-like sinking, and as sudden re-appearance of strength. With these there are, nevertheless, from the beginning of the attack, unequivocal marks of deep injury to the nervous system. The faculties and feelings are strangely disturbed, and the term which the patient expresses, or the furious delirium which often ushers in the attack, soon gives way to fatal coma, or to sudden syncope."*

Phlegmasia dolens is also a disease greatly modified and rendered much more fatal by puerperal fever. We have stated to you that it is not generally a fatal disease. It sometimes happens, however, that the effort to circumscribe the inflammation fails, pus circulates with the blood, and a fatal phlebitis is the result. This may happen when no puerperal fever exists, but is sure to occur if that disease be present. The symptoms are of a typhoid character, commencing with rigors that recur from time to time, followed by partial sweats, a dry brown tongue, sallow aspect, incoherence or delirium, subulcus tendinum, fetid lochial discharge, and great prostration; the white swollen limb may exhibit some patch of dusky redness on its surface, or a local inflammation, with deposition of pus, may occur in some other part. Thus far the symptoms indicate phlebitis, but along with these tenderness of the abdomen, tympanitis, vomiting, and diarrhoea, the evacuations being very offensive, and sweats having that peculiar odour we have mentioned, all characterise the epidemic which exerts its fatal influence on this dis-

case, that are met with at all times, assume a different and a very serious aspect when under the influence of the prevailing epidemic, and become one of the many forms of puerperal fever enumerated by authors.

In the previous detail of symptoms we have not adopted any of the divisions of puerperal fever usually made; our object has been rather to bring before your attention that disease which the great majority of writers agree in calling puerperal fever; in the description of which the earliest and the latest observers perfectly coincide. The intensity of the disease varies in its degree; but in every material point its character is uniform: so far, therefore, we are speaking of one essential disorder. When it is present, however, other diseases are found to accompany it, which are often, I might say generally, classed as forms or varieties of puerperal fever. In such a sense the disease is not uniform, and in this sense we have spoken of its protean character; but we would wish you, in our inquiry into its nature, to separate in your mind the malady itself from its companions. Thus we have erysipelas appearing so constantly together with it—in the same place, at the same time, and under the same circumstances, as to create a doubt whether they are not one and the same disease; an opinion that is greatly strengthened by the fact, that each will reciprocally communicate the other disorder. Then, those affections which we have just named as being modified by puerperal fever, assume many of its characters, and bear a strong resemblance to it. These, however, must be distinguished from puerperal fever, such as we have described it; and for this purpose we prefer a different classification from those more usually adopted. We would propose to you a three-fold division: First, that which may be considered par excellence the puerperal disease or fever; secondly, erysipelas; and thirdly, puerperoid diseases. We shall not now discuss the propriety of classing these disorders in such a manner; it is sufficient for our purpose to separate the disorder that possesses all the essential attributes of the malady, from those diseases which are of a more mixed character—affections that retain the leading feature by which they are named, but still present strong similitudes to the prevailing malady. *The morbid appearances* of puerperal fever are extremely various. The most intense degree of the disease may present no morbid change beyond venous congestion. The peritoneum is perfectly free from effusion, either of serum or lymph, the only alteration being that the colour is dull and the aspect of the intes-

* Ferguson, p. 25-26.

times more livid; the uterus and, with the exception of some dark points in the ovaries, the appendages are unaffected; the large venous trunks are generally distended, and the spleen enlarged and softened. In other cases, that present precisely the same symptoms as the former, considerable serous effusion takes place through the tissues: that in the peritoneum is of a dusky colour, and very abundant: lymph, or what resembles lymph, is found on the surface of the intestines; it is of the same dusky appearance, is not adhesive, and when removed from the intestine exposes a violet-red surface; the uterus is infiltrated like a wet sponge; the sub-peritoneal tissue is also filled with serum, which partly escapes and is partly retained, giving the tissue a jelly-like aspect.

In a third series of the same class of cases the peritoneum is filled very abundantly with sero-purulent fluid: flakes of creamy lymph are found on the intestines, that frequently form a fringe along their margin; the folds are filled with the same, dissolved, and looking like pus; the uterus and liver are frequently covered with it, and the pleura is often found in the same state as the peritoneum. This lymph is quite different from the adhesive or plastic lymph. When raised from the intestines it leaves a smooth, dark red surface, as in the former case. The uterus, its internal surface, its veins, &c. may be quite unchanged. In some instances, however, the uterus is softened; the veins contain pus, and are sometimes lined with lymph of the same character as that in the peritoneum. When this pus is wiped away, the lining membrane of the vein is pale and smooth. The substance of the uterus may be infiltrated with this kind of pus. In one case a section of the uterus resembled the section of a phthisical lung. The ovaries are generally softened, surrounded with pus, and sometimes obliterated. The tissue of the peritoneum is also softened, and separates easily from the intestines or uterus. This condition was particularly remarkable in Drs. Leake and Hulme's cases. The omentum was pulsatious, dark, and putrid-looking—an appearance that led them to believe it was the cause of the disease: the intestines are usually distended with gas; but they may be unchanged in this respect. Such are the appearances presented in cases of extreme severity, where there is little or no pain, great prostration, and no symptom that could be described as inflammatory.

In other cases, where the symptoms are more progressive, and the constitution has a certain power of resistance, the morbid appearances are of a more inflammatory character. Adhesive lymph

is mixed up and confounded with that we have described; the surface of the intestine is rough when the lymph is removed from it, and the intestines, the uterus, and the omentum, are often united with tolerable firmness. In both varieties the intestines are encircled by lines of injected capillaries. In the former class of cases the colour is a dark red or violet hue; in these it is more florid. The uterus is generally increased in volume, the lining membrane thickened, softened, and easily scraped off: its surface has a mottled appearance, partly dark red, partly green. The veins, especially in the neighbourhood of the broad ligaments, are usually filled with pus; and when so, it seems to be deposited there because the vein itself presents no other evidence of inflammation.

These are the leading morbid products of puerperal fever, from which you will perceive that its effect on the tissues varies with the intensity of the disease. When it is at a maximum, no alteration beyond venous congestion is observed. When it is still great, but less in degree, an abundant effusion of serum takes place, and layers of dusky lymph are formed on the intestines; but this lymph possesses none of the properties of that which is produced by inflammation; it resembles more the fibrine of the blood deposited in a lymph-like layer upon the intestine. In other cases of the same kind this lymph or fibrine has a purulent aspect: it is yellow, creamy, and when dissolved resembles pus: if mixed with serum it has a lactescent appearance—the sero-purulent fluid of authors. This deposit is not confined to the peritoneum, but is found also in the pleura, and even in the lining membrane of the uterine veins.

When the constitution struggles against the incursions made upon it, combined with the appearances just described we find evidences of inflammation both in the peritoneum and in the uterus: some adhesive lymph is thrown out, which unites the different parts together. Another remarkable feature in the pathology of this disease is the tendency that exists to softening of the tissues: the peritoneum, the uterus, the liver, the ovaries, are all more or less softened; the ovaries sometimes seem dissolved, the spleen and liver are quite friable,—in fact scarcely any of the tissues escape this destructive process.

Erysipelas produces a different series of morbid appearances. The cellular structure, the veins, the mucous membranes, are chiefly affected; abundant deposits of pus are found, and the softening of the tissues amounts to putrescence. Pus of a more decided character is found not only in the veins but in the substance of the

uterus, where small abscesses are formed. It is met with also in the hypogastric veins and absorbents; in the ovaries, in the form of large abscesses; in the liver, in the spleen, abundantly in the lungs; and I have seen an abscess even in the substance of the heart. It is found in the intermuscular cellular structure, and especially around the joints. The loose cellular tissue at the back of the orbit is often its seat, and large abscesses are frequently observed in the fine reticular tissue between the peritoneum and the uterus. The mucous membrane of the vagina may be in a state of slough, and that lining the uterus covered with a putrid sanies: the substance of the uterus is partially softened, black, and friable, the odour extremely offensive. Such are the effects of erysipelas; but along with these the appearances of puerperal fever are so combined as to confuse us greatly in our attempts to separate one disease from the other. In some cases sero-purulent fluid and lymph are found in the peritoneum; the intestines are distended with flatus, and streaked with lines of injected capillaries. The true characters of each may, however, be recognised in less complicated cases; and then we find in puerperal fever that the chief morbid changes are in the serous membrane; while in erysipelas the mucous surfaces, the veins, and cellular tissue, are principally engaged. The peritoneal fever of Gooch was remarkable for the absence of any morbid alteration in the peritoneum, notwithstanding that all the symptoms pointed to it as the seat of the disease: hence the doubt arose, could this be erysipelas in a serous membrane presenting itself in a new form, but preserving its evanescent character.

In gastro-enteric fever, mania, and phlegmasia dolens, the morbid changes in each are characteristic of the disease, but are in a similar manner mixed up with the appearances of puerperal fever.

Such is a brief outline of the pathological anatomy of this disorder. Its treatment should be the next subject for our consideration. But before we can lay down the principles that should guide us, some important questions must previously be determined. The most opposite modes of treatment have been recommended by practitioners of acknowledged powers of observation; and in defence of these plans much controversy has arisen. In order, therefore, to remove some of these difficulties, and to make an approach towards the truth, we must endeavour to gain some insight into the nature of the disease that we are about to treat. We must decide what it is,—whether it be an inflammation or a fever, whether the inflammation be

the cause of the fever, or the fever the cause of the inflammation. If it be found an essential disease distinct from ordinary fevers, and different from the more usual inflammations, we must ascertain, if possible, its special characters, so as to decide upon what principle remedies produce their effect. These enigmas we shall, on a future occasion, endeavour to examine and, if in our power, to resolve.

Reviews.

Henke's Zeitschrift für die Staatsarzneikunde. Erstes; Vierteljahrheft, 1850.

THE present part of this long-established journal, devoted exclusively to medical jurisprudence, contains about the average number of papers by different contributors, some of them entering fully on details, and engaging in the discussion of questions deserving the attention of the profession. In the opening article the important subject of PRISON DISCIPLINE is handled by Dr. Ritter, in a well-written and sensible Report, addressed to the Wirtemberg legislature. This is followed by an extended notice of a case of assault, in which certain injuries of the head, not of themselves of a serious character, proved subsequently fatal, from the supervention of phlegmonous erysipelas.

The reporter, Professor Von Siebold, attributes the unfortunate result in this instance to the want of proper care and unskilful treatment on the part of an unqualified practitioner,—a conclusion which we must hesitate to adopt, aware as we are of the notoriety of the fact that in some constitutions, and under certain seasonal and other influences, the most favourable situation, and the most skilful surgical treatment, will not always succeed in averting such a termination after scalp wounds even of moderate or trifling severity. In April 1828, a feeble old woman, of the name of Emslie, was tried on the northern circuit in Scotland for striking a girl of 12 a blow on the top of the head with her walking-stick. Although the integuments were barely abraded, this slight injury was followed by erysipelas, and diffuse suppurative inflammation under the scalp and eyelids, which proved fatal in the hands of an experienced sur-

geon. After death the outer table of the skull was found covered with superficial carious patches.

• A considerable space in the journal is devoted to the record of two cases, the one of actual, the other of suspected child-murder. The most prominent feature in the first of these, from the pen of Dr. R. Beck, is the discussion to which it gave rise as to the *viability* of the infant, under ordinary circumstances, on account of the unusual size of its head, and the consistence of the brain at the time of its birth and death.

Discussions of this sort, however, though important to our continental brethren, do not directly concern ourselves, except as physiological problems. Nowhere, indeed, do we observe a more marked contrast between the practice of our own courts of law and those of France and Germany, than is presented by the lengthened investigations to which points of this nature give rise amongst the latter. This arises from the existence of a distinguishing feature of British criminal law, in which the *intention* is a much more important element to establish than the *precise result*,—the former, especially in England, often constituting the crime. Thus, in the Scottish case we have just alluded to, the charge against the prisoner was one of assault merely, although it resulted in the loss of life.

The interest of the case of suspected infanticide, for which we are indebted to Dr. König, turns mainly on the likelihood of the child's having perished from the cause assigned by the mother—namely, its suddenly dropping from her in the course of a rapid and unexpected labour, and coming with its head on the hard ground while she was in a standing posture. The infant was immature. The hydrostatic test indicated that it had breathed, at least partially, but everything else showed that it had survived its birth but for the very shortest period. The cranial bones were unusually moveable. The encephalon generally, and the upper portion of the spinal cord, were in such a pulpy or softened state as to have obliterated all distinctions of their separate parts, while their inner investing membranes were infiltrated with blood. A clot of blood, amounting to half an ounce, was effused on the surface of the brain, immediately under the smaller fontanelle. The body presented no trace of putridity. There

was no fracture or other injury of the cranial or spinal bones, and the integuments of the head were in a natural state. Dr. König reports the child's death as arising from cerebral concussion and apoplexy, and adduces the appearances within the head and spine as corroborative of the statement of the mother.

In admitting this opinion as to the cause of death in the instance before us, we are met by difficulties which, if not sufficient to overturn it altogether, appear to us to be such as to weaken the probability of its accuracy. Not to speak of the degree of violence here attributed to a fall of three feet or thereby, at the most, and which left no indication of its occurrence on the integuments or bones, we are too little acquainted with intra-uterine disease in the fœtus to justify us in asserting that softening of the brain could not have arisen from natural causes, as has been observed with other organs in the fœtus. Besides, at the period at which the child in question had arrived (the 210th day, as calculated by Dr. König) the nervous centres have naturally but little consistency, and it is not very unusual to meet with a very pulpy state of the brain, with dyeing of its membranes, and even minute ecchymoses of the latter. In our examinations of still-born children, when violence is out of the question, and when the evidence of such a lengthened stay in the uterus after death as would account for those appearances by referring them to putrefaction, is not always attainable. The existence of effused blood under the fontanelle is certainly the circumstance which affords most support to the assumption of its death by violence, in coming with its head against the ground at its birth. We have also a corroboration of the mother's statement, as to its birth having been a rapid one, in the absence of tumefaction of the scalp, the usual accompaniment of such a tedious and difficult labour as would account naturally for the occurrence of the apoplexy of the new-born.

It appears, however, from the further proceedings in this case, that known *abortives*, as well as substances popularly believed to be such, were found in the woman's possession, and that the labour had been attended by profuse uterine hæmorrhage, and irritation of the alimentary tube.

Passing over two papers of minor

importance, the article in this journal which has afforded us most interest is the report by Dr. Pfeufer of the medico-legal proceedings instituted at the time in connection with the sudden and violent death of the celebrated Berthier, Prince of Wagram, at Bamberg, on the 1st of June, 1815, in the 62d year of his age.

From the narrative we gather that Berthier had, on the 15th of March, retired with his family to this place on the return of Bonaparte from Elba, and the consequent retreat of the Bourbons to Flanders, and had there lived a quiet and somewhat monotonous life with the ducal relatives of his princess during the few weeks which closed his eventful career. He was in the custom, however, of taking short excursions in the vicinity, in one of which he had nearly been drowned, while crossing the Maine, from the fall of his horse. He was once with his wife and mother-in-law at the theatre, and on several occasions he had there associated with the Russian General Sacken, who frequented the ducal box. About this period he had consulted Dr. Zeigler, on account of some gastric disorders, and appeared to be in low spirits. He was also suffering from migratory gouty pains, and had been subject previously to attacks of this disorder in the retrocedent form.

On the 24th of May, 1815, the Russian army, under Count Barclay de Tolly, took up its quarters at Seehof, about a league from Bamberg. On the 1st of June one of the Russian cavalry divisions advanced into the town at 1 P.M., and clouds of dust along the road announced that it was followed by the main body. It was at this moment, on the alarm getting up that Berthier had thrown himself from a window in the upper floor of the Ducal residence, that Dr. Pfeufer was sent for, when he found the body of the Prince lying on the street quite dead, with blood, the brain, and fragments of the cranial bones scattered over the pavement around it. The face was so much injured that the features could not be recognised.

Madame Gallien, the nurse to the children of the deceased, gave an account of the last few hours of his life. From this it appears, that on the forenoon of the day in question he had been seen by her to go repeatedly to

the window of his apartment, which was contiguous to his children's room, and to look towards the quarter by which the Russian troops were advancing. Between one and half-past one P.M. he made his appearance in the nursery, and desired her to take the children to the carriage, which was in waiting. Ere she had time, however, to draw on their gloves for this purpose, he countermanded the order, alleging in excuse the dusty state of the roads. On this, while the nurse was between the doors of the two apartments, she heard him mount upon a large arm-chair (*fauteuil*) which stood in a recess in the nursery window, and more than once repeat the words, "*Ma pauvre patrie!*" Alarmed by the fall of the arm-chair, she now rushed into the room, in time to witness the fatal leap, when she fainted and was ill for weeks after.

The judicial inspection next day disclosed the following injuries on the body of Berthier. The head was laid widely open from the occiput through both parietal, the frontal, and the nasal bones, to within half an inch of the upper lip. The whole of the proper cranial, as well as several of the facial bones, including the lower jaw, were fractured; fragments of the former, to the number of 43, having been collected. The skull was almost empty, and its base comminuted. The skin over the centre of the sternum was excoriated. The upper portion of the sternum, and several of the ribs on each side of the chest, were fractured. The cavity of the chest was full of effused blood; both lungs were collapsed and anemic; the pericardium was torn; the left ventricle superficially wounded; the right ventricle laid open through the septum cordis to the extent of about two inches; and the veins cavae at their junction, and the ascending aorta near its arch, partially divided. The liver was soft, and rent at two places; as was the inner face of the spleen, which was very small, soft, shrivelled, and pulpy, with blood effused into its substance. The jejunum and colon were stained with bile. Several excoriations were noted on the upper and lower extremities. The right leg, the first metacarpal bone of the left great toe, and the third cervical vertebra, were fractured.

Dr. Pfeufer very properly repudiates the opinion, chiefly propagated by the French party in Germany, that Berthier

had been forcibly thrown from his window. He barely touches on the question as to the probabilities of the fall originating in *suicide* or *accident*, though he leans to the latter, but as we think the less likely, view of the matter. In answer to the judicial interrogatories put to him, he had no hesitation in deciding—1st, that the death of Berthier had been caused solely by his fall on the street; 2d, that instantaneous death must have been the inevitable issue of such a fall; and 3d, that the appearances presented by the abdominal viscera tallied as nearly as was to have been expected with the state of his health shortly before death, as described by Dr. Zeigler.

As to the justness of these judicial decisions, there can, we think, be little room for difference of opinion. We cannot extend this remark, however, to one other statement advanced, *without qualification*, at page 120, where, after summing up the injuries on Berthier's person, Dr. P. asserts that in no other way than by a fall from a height could such injuries have been caused in and on it. This, we must remark, is contrary to our own experience, which has shown us, as was to have been expected, that the consequences of the fall of a person from a height on the one hand, are often precisely identical with those which on the other are produced by the drop of a heavy substance on its coming forcibly against the human body, particularly where either agency has been so effective as to have led to instant death. In these circumstances the injuries common to both those modes of sudden death we have found to be as follows—viz. fractures of bones, at times dislocations and lacerations of the soft parts, ruptures of viscera, and, where no large vessels had been laid open, a striking absence of hæmorrhage in the vicinity of the parts involved in the various forms of violence. But, what is even of more importance to observe, is that injuries of the same character as the above are all producible in the same way in the body *after death*, of which we have met with several examples. When heavy falls, or the weight of a falling body, has been the cause of death, the fatal event is usually owing to the severe shock to the nervous centres, and the heart's cavities are found to be almost entirely empty, or to contain fluid blood about equally distributed between its two sides,

which circumstances sometimes serve to discriminate between post-mortem and vital injuries of the kind we have been considering.

The Pathology of the Kidney in Scarlatina. Illustrated by Cases. By JAMES MILLER, M.D. 8vo. pp. 177. London: T. and W. Boone. 1850.

More than half of this book is taken up with an account of cases occurring in the practice of the author during the epidemic of scarlatina which prevailed in London in 1848 and 1849. These cases, of which many are here recorded with great care, present little that is novel in the history of disease, but they possess much value as a truthful representation of the nature of a particular epidemic. Works of this kind, when well executed, form useful contributions to medical science; and as the type of scarlatina is now known to vary so much in different epidemics, they often afford the only key by which we can explain what would otherwise seem unaccountable omissions or errors in descriptions of the disease previously handed down to us.

Other authors besides Dr. Miller have of late given us their observations on scarlatina as it has prevailed in different districts; among these may be mentioned Dr. Charlton of Newcastle, Dr. Newbigging of Edinburgh, and Dr. Hamilton of Falkirk, whose labours will prove of much value to future inquirers on the subject.

The first chapter contains an account of the Pathology and Symptoms of Scarlatinal Dropsy. Its distinguishing feature is the stress laid by the author on the anæmic state of the system accompanying the disease; together with an argument in favour of the opinion that the dropsy itself is not to be regarded as a sequela of the scarlatina, but as a specific effect of the same animal poison which produces the eruption and the sore-throat. The poison of scarlatina, like many other animal poisons, does not act exclusively on one organ alone: thus the skin, the throat, and the kidneys, may all become involved. Neither does the poison manifest its action on these organs at the same time; and, from the circumstance that the kidney seldom shows signs of disease before desquamation has begun, an error of *post hoc propter hoc* has arisen,

and the dropsy has usually been considered as the effect of cold upon the excited skin, and not as a direct consequence of the contagious poison. When the skin is alone or chiefly involved, the disease, as we all know, is termed scarlatina simplex; when the throat suffers, it is scarlatina anginosa; and Dr. Miller proposes that those rare cases in which dropsy follows the application of the poison, without the appearance of any rash or throat affection, should be viewed as another special variety of scarlatina. Several very interesting examples of this disease are detailed in the work.

Dr. Miller thus points out the distinction between scarlatinal dropsy, and dropsy after scarlatina. It is a matter of great practical importance.

"Cases of dropsy, dating their origin from a scarlatina-rash, with acute renal symptoms at the ordinary period, are frequently presented to our notice some months, or even a year or more, after. In these the kidney appears to have taken on a permanent morbid action, the result of which is true Bright's disease. Three years ago I attended a boy, who died five years after the acute renal dropsy of scarlatina, and in whom the chronic malady was well established; and three other children of the same family, who suffered scarlatina at the same time, died of renal dropsy long after complete recovery from the exanthem. In dispensary practice we sometimes meet with young persons labouring under chronic renal dropsy, who date their malady from scarlatina. About seven or eight cases of this kind have fallen under my notice during the last three years. These alone I conceive entitled to be considered as *sequela*, or cases of *dropsy after scarlatina*; the subacute and chronic affection occasionally succeeding the first month, or even much later, being properly consequent upon the tertiary specific actions, which occur within the normal limits of scarlatina, on the fourteenth or twenty-first day of the disease." (p. 56-7.)

The connection between dropsy and anæmia is thus explained by Dr. Miller.

"The main feature of the acute general dropsy of scarlet fever is the sudden occurrence of *anæmia*, a circumstance owing to the arrest of the depurating function of the kidneys, and certain important changes induced in the physical and chemical qualities of the blood. Superadded to dropsy, it imparts the well-known condition *leucophlegmaria*. Such changes occur simultaneously with the general plethora in-

duced in the capillary system by the interruption to the circulation at the kidney; in common words, the cutting off or obstruction to the vascular circle at that point. The importance of the vascular system of the kidney to the general circulation may be estimated by the relative size of its arterial and venous trunks with those from which they spring or join. The importance of the renal secretion must also be viewed solely in relation to its balancing or compensating secretion—viz. that of the skin and digestive surface. The occurrence of general surface-œdema, the characteristic of renal dropsy,—effusions at one and the same time into various serous cavities,—fluxes, such as diarrhoea, bronchorrhœa, and albuminuria,—can be well conceived in a disease affecting an organ that commands so universal an influence over the systems of circulation and secretion. Renal dropsy, then, may be either acute or chronic, according as the vascular system of the kidney becomes suddenly or slowly hyperæmic, or in any way obstructed, but is invariably and necessarily associated with anæmia or apparent bloodlessness." (p. 4-5.)

Dr. Miller notices incidentally a form of dropsy depending on disturbance of the menstrual function, with which most practitioners are familiar, but which appears to us to have been passed over too lightly in works on the practice of physic.

"It is difficult to leave this point without alluding to another general dropsy, essentially a blood-disease, but always of a chronic nature. I allude to that arising from acute or chronic suppression of the menstrual secretion. The occurrence of anæmia is marked from the first, pointing out the important changes effected in the blood through an arrest of the depurating office of the uterus in its gland-like capacity; and not until this condition has existed for some time does a slow and ill-defined general dropsy become apparent. This is probably sooner or later hurried, and the plethora of the capillary system passively induced, by the weakened condition of the heart, from long deprivation of its normal stimulus, red blood. Either of these forms of general dropsy may be superadded to the cardiac, stamping it with the impress of their respective characters." (p. 6.)

Dr. Miller states that he has rarely seen a cardiac dropsy occupying the entire superficial areolar tissue which had not conjointly a renal origin. When this symptom arises, therefore, in the course of disease of the heart, it is

usually at a late period, after the circulation through the kidneys has begun to participate in the general embarrassment. This universal congestion impedes the action of the various organs which depurate the blood, and hence arises that "sustained tension of the capillary walls co-existing with distinct blood lesion, which is the condition necessary for acute general dropsy."

"A very slight anasarca and albuminuria may, independent of any internal phlegmasia, be associated with symptoms of great intensity, due, probably, to both the capillary vessels generally, and those of the kidney, failing to relieve themselves in the ordinary mode; the dropsy being simply an unloading of the capillaries in a state of plethora, on the one hand; albuminuria, a simple depletion of the kidney, on the other; hæmaturia, a more complete sign of the spontaneous depletion of the organ. Albuminuria and hæmaturia, further, are not apt to decline, *pari passu*, with the dropsy and other symptoms. Towards the close of the latter, the patient is to all appearance convalescent; the urine often observed to increase or maintain a high degree of coagulability, protracting itself to an indefinite period while the patient remains in an anæmic condition. In proportion as the quantity of albumen is on the increase, the density of the secretion usually falls—a circumstance due principally to a deficiency of the proper constituents of the urine. A higher specific gravity, with decreasing coagulability, mark the returning eliminating function of the kidney." (p. 11-12.)

Dr. Miller notices the frequency with which the lungs, pleura, and peritoneum suffer from inflammation in the course of scarlatina; and he gives the following as the character distinctive between scarlatinal and idiopathic inflammation:—

"However acute the symptoms of invasion, or with whatever degree of intensity secondary inflammations may set in, a remarkable proneness to asthenia or failure of the heart's power manifests itself at an early period of the disease. In the pneumonia, pleuritis, peritonitis, or severe uncomplicated form of the disorder, whether the treatment adopted be such as may be termed active or not, this tendency is invariably shown, and the patient will often succumb under the best devised remedies. This important feature is of the utmost practical moment—that during the course of the disease a want of muscular power is invariably manifest; and death, in the absence of cerebral complication—a rare oc-

currence—is brought about by asthenia or failure of the heart's power and action." (p. 15.)

In conclusion, let us add, that the work before us does much credit to Dr. Miller's industry and practical ability.

Proceedings of Societies.

PATHOLOGICAL SOCIETY OF LONDON.

DR. LATHAM, PRESIDENT.

May 6, 1850.

MR. DIXON exhibited a

Secondary Encephaloid Tumor from the Scrotum,

removed twenty-two months after castration for the same disease of the testicle. A man, æt. 22, was admitted into St. Thomas's Hospital, 4th July, 1848, with enlarged testicle. First noticed eight years before, and attributed to a kick: it gradually increased, with only a feeling of weight in certain positions. Three days before admission, whilst walking, was attacked with great pain in the testicle, which he observed rather more swollen, and the skin red. The testicle felt firm, except at the forepart, where there was indistinct fluctuation. The cord much thickened, and very tender; but the left loin was the chief seat of pain. The inguinal glands were healthy. The slow progress of the swelling, and the almost total absence of pain, indicated simple chronic inflammation, terminating in abscess, rather than malignant disease. He was kept in bed, with a bread poultice applied to the part, and he improved slightly. On the 13th, the cord was much swollen, and he dreaded its being touched. By the 17th the swelling of the cord disappeared with the pain; the testicle, however, had become rather larger.

28th.—A puncture was made at the front part of the testicle, and about 3ij. of bloody fluid drawn off. Within a few days indistinct fluctuation could be felt at other parts, and the whole mass was gradually enlarging. The pain in the cord was at times very severe, and the patient, naturally timid and excitable, was evidently suffering much in his general health from the local irritation.

August 5th.—The testicle was removed: it presented a brainlike mass, softened here and there to a semifluid consistence, particularly at the centre, where the fluid

drawn off had collected. Its structure consisted of nucleated cells, with scattered remains of tubes; a portion, however, of the healthy structure of testis remained, about the size of an almond without the shell. The wound healed favourably, and the patient was dismissed Sept. 10th.

He was admitted again April 16th, 1840. The scrotum on the left side was occupied by a swelling, which looked like an enlarged testicle, rather bigger than a hen's egg; in general tense and elastic, but rather knobby behind, and at one or two points indistinctly fluctuating. In front it adhered slightly to the old cicatrix. The superficial veins of the left half of the scrotum are much dilated, and the pulsation of two or three large arteries could be felt when the swelling was grasped. The cut end of the cord, at the external abdominal ring, was not at all enlarged. A hernia, about as big as a pigeon's egg, protruded at this point when the patient stood. There was no swelling of the inguinal glands.

He said he discovered a hard knot at the bottom of the scrotum within a few days after leaving the hospital in 1848; it was about the size of a small horse-bean, and gave him no pain. Within a month it became the size of a marble, and continued so for nearly a year, during which he followed his ordinary occupation. In December 1849, it increased rapidly, without pain, and had steadily increased till his admission.

April 27th.—The tumor was removed, with all the skin covering it. Very free bleeding occurred. The wound is now rapidly healing, and the patient's general health good. The tumor, when divided vertically from behind, appeared to form the lobes, two placed posteriorly being of firmer consistence than that in front, which was so pulpy as to have given to the finger the feeling of fluctuation. The firmer portion of the mass was opaque and brain-like, the softer part of a pale flesh tint, dotted over with specks of blood from divided vessels. Near the centre of the tumor there was a clot of recently effused blood, and in the slight interval between the lobes the structure of the tumor was loosened and infiltrated with yellow serum. The portion examined with the microscope was almost wholly made up of rounded nucleated cells, and large compound granular cells.

Dr. HEALE exhibited a specimen of
Diseased Temporal Bone.

Harriet G., *æt.* 20, was admitted into the Royal Free Hospital on March 9th. She had great fluttering and irregular vibrating action of the heart, resembling

erythismus mercurialis, but which subsided in a day or two. She was deaf, and had long suffered from intense earache, with occasional fetid discharges from the meatus. She was restless, sleepless, occasionally delirious, and had no appetite. Soon after her admission an abscess formed just above the left collar bone, which discharged large quantities of matter until her decease. The disturbance of the heart's action returned after three doses of Hydr. c. Creta, six grains having been given every six hours, but again subsided in about two days. She then had severe delirium, which abated after a sudden large and fetid discharge from the left ear: finally she had erysipelas, violent delirium succeeded by coma, and died April 15th.

Autopsy.—A very large excavated abscess, with sinuses in various directions, was exposed at the root of the neck on the left side, communicating with, and extending through, the whole of the carotid sheath; the internal jugular vein was full of matter, which was also found burrowing down in the direction of the vena innominata: a fibrinous clot was found in that vein, extending into the descending vena cava; this, being examined by the microscope, was found to contain pus globules. The lungs were filled with a frothy and purulent infiltration, without consolidation; there was a small circumscribed abscess between the pleura pulmonalis and the lung on the right side, but not extending into the substance of the latter. The heart was healthy. The liver was pale coloured, and contained abundance of fat cells, but no pus. The kidneys were coarse. The cerebrum was healthy; the arachnoid membrane appeared in parts smeared over with pus, more particularly in the posterior part, near the falx joining the tentorium. The tentorium covering the left lobe of the cerebellum was much inflamed, thickened, and had matter between it and the arachnoid covering that lobe of the cerebellum; and immediately beneath this, on cutting into the cerebellum, a circumscribed abscess, about the size of a walnut, was discovered; this was nearer the falx cerebelli than the outer margin of the cerebellum: that part of the cerebellum which was in contact with the cranial bones was healthy. The petrous portion of the temporal bone was examined by Mr. Toynbee, whose notes are appended. The lateral sulcus of that side was more conspicuous than the opposite, shining through the dura mater, and darker coloured, marking out the continuity of the abscess of the cerebellum with the disease in the bone, and with that in the carotid sheath.

Dr. Heale considered that the prominent

points were:—That the palpitation probably was occasioned by the morbid stimulus of the pus in the blood; that the phlebitis was caused either directly by the disease in the lateral sinus, or else propagated from the abscess in the cerebellum; that the abscess in the cerebellum was not occasioned by direct contiguity with the diseased bone, since healthy cerebellar structure intervened, but continuous with it in a tortuous direction by means of the lateral sinus; and that the cases of the accession of abscess in the cerebrum or cerebellum were secondary to disease in the auditory apparatus without the intervention of phlebitis of either of the veins, or of the sinuses.

Mr. Toynbee's Notes.—The meatus contained purulent matter. The glandular and periosteal portions of the membranous meatus were much softer than natural, and they adhered but slightly to the surface of the bone. The bone forming the upper and outer half of the tube was observed to present numerous foramina for the transmission of blood-vessels much larger than in the normal state, and some of them were surrounded by delicate layers of new bone; through the larger of these foramina small bristles could be passed, and they appeared to communicate with canals in the interior of the bone which were continuous with orifices in the *sulcus lateralis* at its inner surface. The lateral sinus was seen to be of a dark-brown colour; the dura mater forming its posterior wall was entire. The sinus was full of coagulated blood mixed with purulent matter; the dura mater constituting its anterior wall, and which was in contact with the surface of the bone, forming the *sulcus lateralis*, was very thick and soft; portions of it were destroyed by ulceration, and the bone was exposed. The bone forming the *sulcus lateralis* was of a dark colour, and covered by masses of lymph and pus; its surface was rough, presenting throughout numerous orifices and tortuous grooves, this appearance being produced by the almost entire disappearance of the internal table of the skull, which (excepting two scales, each measuring about two lines in diameter), had been destroyed by caries. The destruction of bone by caries had advanced so far at one point that an orifice about a line in diameter had been produced, which communicated with the upper part of the mastoid cells. The caries was not confined to the interior of the skull, the surface of the jugular process of the occipital bone having been destroyed. There was an orifice in the posterior part of the membrans tympani, through which it is probable that the incus had been discharged, as it was not found in the tympanic cavity. The mucous membrane lining the tympanum was much thicker than natural, and

in the upper osseous wall were observed a few small foramina for blood-vessels, and a carious orifice of a size sufficient to allow the passage through it of a small pin.

It is most probable that the disease of the tympanic cavity was the effect of that in the external meatus and in the lateral sinus.

Mr. WM. ADAMS exhibited

Two Specimens of Transverse Fracture of the Patella: one with true Ligamentous Union; the second an Ununited Fracture.

In the first specimen, the fragments, which admit of very limited motion, are united by fibrous tissue, having all the appearance of true ligament, passing directly between the fractured surfaces, in thickness equal to the fractured surfaces. This is developed from a plastic material poured out between the fractured surfaces; when perfectly formed, it has a dense fibrous structure, with a fasciculate arrangement, and resembles true ligament. Towards the joint this ligamentous substance presents a smooth surface, continuous above and below with the articular cartilage, as if covered by a membrane, but no membranous layer is distinctly separable. Externally the connecting ligament is covered by an aponeurotic layer passing over both fragments: this is very obviously distinguished from the subjacent true ligament, presenting a laminated appearance, not being fasciculate, and more delicate in structure: it varies in thickness from less than a line at the fractured edges to rather less than one-eighth of an inch in its centre. This layer appears to be derived simply from the fascia which passes over the patella. The fragments are separated to a greater extent anteriorly than posteriorly,—a condition which is found very frequently in both the true ligamentous union and in the ununited fracture.

The second specimen would generally be regarded as ligamentous union, in which the ligament had become elongated five inches, but the fragments connected by a strong unyielding band. It will be seen that this does not present the characters of ligamentous structure, nor of new formation: it has an expanded membranous form, differing from the connecting medium in the first specimen in its relative position to the fractured surfaces, which it does not directly connect: it connects the fragments by passing between their periosteal surfaces, the fractured surfaces maintaining the same relative position with the joint as they would immediately after a complete transverse fracture. In true ligamentous union, the space between the fractured surfaces is completely filled up with the new uniting medium; but in the condition

now described, a gap the same size as exists immediately after the injury remains permanently towards the joint; better seen in a preparation, No. 328, in the museum of St. Bartholomew's Hospital. In its anatomical character, this uniting medium resembles a strong sponerosis, intersected by tendinous bands: although consisting of fibrous and areolar tissue, it has neither the fasciculate arrangement nor appearance of true ligament; numerous flattened and expanded tendinous bands, irregularly disposed, but generally taking an oblique or curvilinear direction, are very distinct in the preparation exhibited. The difference in its anatomical character and its relative position to the fractured surfaces lead to the conclusion that it is not developed in the same way as the structure in the preparation first described; nor is there reason for supposing it to be derived from the periosteum; and where the fragments are considerably separated the periosteum cannot be supposed to assist in forming it. For these reasons, and after examination of the specimens in the principal museums, it may be concluded that the uniting medium is formed simply by the fascia in a thickened condition, which passes over the patella, connecting the fascia of the thigh with that of the leg, and laterally continuous with the tendinous structures of the knee-joint. The bursa naturally existing on the anterior surface of the patella is probably incorporated with this fascia. This connecting medium in the specimen is about five inches in length, and about one line in thickness, except near the upper fragments, where it is increased by thick tendinous bands, over which the membrane is folded. In this condition the fragments may be considerably separated, or only to a slight extent, as in No. 537 in the museum of the College of Surgeons. The same conditions occur in fracture of the olecranon, of which there is a specimen in St. Thomas's Hospital. If this view of the connecting medium be correct, the fragments of bone are in the same condition as those of an ordinary ununited fracture; the periosteal surfaces are simply adherent to the neighbouring structures, and no new material has been developed between the fractured surfaces.

It would be advisable to distinguish this class of cases from those of true ligamentous union, and to consider them either as instances of ununited fracture, or of sponerosis union: the latter name suggests itself, because the functions of the joint are ultimately restored, even where the separation is to the extent of four or five inches, almost as perfectly as in true ligamentous union; but in reference to their pathology, they can only be considered ununited fractures. Mr. Adams saw

a good example in a woman who fractured her left patella transversely twelve years ago, and the fragments are now four and a half inches apart, and evidently in the condition now described as ununited fracture: the connecting medium is probably not more than a line in thickness. In the bent position, the prominences of the condyles of the femur, and the depression between them, are very obvious, and the finger seems only to be separated from the articular surfaces by the skin; she can run upon unequal ground, or up and down stairs, with ease and security. Casts from this case are in the Museum of St. Thomas'. The time required for the restoration of the functions of the joint will probably be proportionate to the extent of the separation of the fragments. The principal deviations in the relative position of the uniting medium to the fractured surfaces are the following. The sponerosis structure passes from the periosteal surface of the upper to the articular edge of the lower fragment. This depends either upon the eversion of the lower fragment, so that its fractured surface becomes applied and adherent to the fascia or sponerosis already described (and there is a remarkable tendency to eversion in the lower fragment), or upon the alteration of its form from irregular absorption of its outer part and fractured surface. This may also take place in the upper fragment. Sometimes the sponerosis appears to be folded inwards between the fragments, to the fractured surfaces of which it becomes closely and firmly united, and then connects the fragments by passing between their articular edges, as seen in preparation No. 535, in the museum of the College of Surgeons. In this case the gap exists towards the skin, instead of towards the joint. Sometimes the sponerosis is partially folded in, and adherent to about half the fractured surfaces, in which case it may at first appear to pass from the centre of the fractured surface of one fragment to the centre of the other, as seen in No. 328, Bartholomew's Museum. The principal indications in treatment to which this view of the pathology of this class of cases would direct attention are, to prevent the eversion of the fragments, especially the lower, and to approximate the fragments as quickly as possible, so as to prevent the folding inwards of the fascia or sponerosis, and its subsequent adhesion to the fractured surfaces.

Mr. PARTRIDGE exhibited

A Dissection, showing the condition of the muscles of the Eye-ball, and of their nerves, in a strongly marked case of Squint of many years' duration.

A man, 30 years of age, appeared to

have had squint from childhood. The affected eye-ball seemed healthy, and as large and as firm as the other. Its cornea was quite transparent. The squint was so complete as almost to bury the cornea under the inner corner of the eyelid, from which it was scarcely disturbed by any sympathy with the movements of the sound eye. Upon removing the contents of the orbit, and examining the muscles and nerves, it was found that—1. The external rectus was elongated, and much attenuated. 2. The internal rectus was short, bulky, and had a much thickened tendon, scarcely differing in appearance from cellular tissue. The other recti, and the superior and inferior oblique, with the levator palpebræ, were of their ordinary size. All the muscles appeared a little paler than natural. Under the microscope, the muscular fibrils (except those of the levator palpebræ) appeared to be made up of mere granular matter enclosed in the usual sarcolemmar sheaths: only here and there a few striped fibres were observable, and in the external rectus they were scarcely to be detected. In the levator palpebræ they were distinct. All the branches of the third nerve were healthy. The sixth nerve, just after its entrance into the orbit, had a light grey semitransparent look, and in its trunk was an oval enlargement about the size of a pin's head. This was quite firm to the touch.

Mr. Partridge had observed in a subject in the dissecting-room a similar tumor to the above, involving the branch of the median nerve which supplies the muscles of the ball of the thumb. In this case also the muscles were wasted, and the plump of the thumb flattened. This appearance of muscular fibre occurs frequently in the unused muscles of club-foot. There is no fatty degeneration.

Also

A case of small Chronic Abscess in the lower part of the Tibia, with a communicating tract to the exterior of the bone.

The patient, 24 years of age, had a blow on the leg eight years before. Pain, swelling, and lameness, followed a few weeks after the accident. The swelling continued for four years, and was sometimes severe, especially at night. Finally an abscess formed above the front of the ankle-joint, and broke, discharging thick pus. From this time the pain ceased. A piece of necrosed bone was found in the fistulous bony tract leading from the abscess. The lower end of the tibia was much thickened from chronic inflammation. The abscess (about three-quarters of an inch in diameter) was lined with an organised membrane. Probably, as in similar cases, the abscess

had its origin in the death of a small portion of the cancellated part of the bone.

Mr. COULSON exhibited

A Tumor, the size of a large orange, removed from the Right Axilla.

A man, æt. 46, had his thumb amputated two years previously by Mr. Key, for supposed malignant disease. As life was prolonged two years with no other sign of disease, the removal of this tumor was thought justifiable, as it was increasing rapidly, pressed on the axillary vessels and nerves, and caused swelling, numbness, and partial discolouration of the limb. Doubts were entertained as to its malignant nature. An examination of it by Dr. Quain, under the microscope, showed it to consist of a stroma, composed of fibres, cells, and fatty matter, also numerous bloodvessels. The relative proportions of these constituents varied in different parts. Some were almost composed of molecular fatty matter, and a few nucleated cells, with broken remains of cells. In other parts it appeared almost entirely composed of cells, granular masses, and a little fatty matter. These cells in parts were seen to assume a regular order, so as to resemble fibres. They were in general large-sized, containing from one to four well-marked nuclei and granules, and the great majority of them caudate.

Also

Two specimens of Carcinoma of the Breast,

One from a man, æt. 53, whose mother and paternal grandmother died of cancer. It shows the usual appearance of a carcinomatous growth,—some gland tissue at the nipple like a large wart. The disease followed a blow which he received in August last.

ACADEMY OF SCIENCES, PARIS.

May 13, 1880.

Poisoning by Oxide of Zinc.

M. BOUVIER, physician to the *Hôpital Beaujon*, communicated the following case in reference to M. Flandin's comparative experiments on the poisonous influence of oxides of zinc and lead, which were stated at the last meeting of the Academy:—

A man, aged 42, was admitted into the hospital suffering under all the symptoms of metallic colic. This man had been employed in the factory at Asnières, with twenty other labourers, in filling casks with

* See M.D. GAZ. of last week, p. 911.

the oxide of zinc, or repairing the damaged oses. In performing this work they were surrounded with an atmosphere loaded with the dust of the oxide. The men were all seized with symptoms of metallic poisoning at about the same time. The patient in question suffered most severely. When admitted, he had colicky pains, vomiting, constipation, &c. The means used were, the administration of sulphate of magnesia by the mouth, followed by a purgative enema of senna, jalap, &c. Opium was given after the bowels had been freely purged. For the period of six days the patient took from six to twelve grains of gamboge daily, and on alternate days sulphurous and soap baths. The patient was cured in the course of eight days.

M. Bouvier had ascertained by analysis that the oxide of zinc contained neither lead, copper, nor arsenic.

New Method of performing the Cæsarean Operation.

M. BAUDELOQUE submitted the following as a method which *will probably succeed perfectly*!—

1. To make an incision along the middle of the posterior wall of the vagina, from above downwards, for the extent of two inches, beginning at the point of its junction with the cervix uteri.

2. To leave the expulsion of the infant to the uterine contractions, which would complete the delivery in the ordinary way (?).

SURGICAL SOCIETY OF PARIS.

May 15, 1850.

Treatment of Ascites by Injections of Iodine.

A REPORT was read on a work by M. Boinet, in which the author details eighteen cases of the injection of various substances into the abdominal serous cavity for the cure of ascites. The protoxide of nitrogen gas, the vapours of wine, of alcohol, and of water, a decoction of cinchona, and lastly, iodine, were mentioned as the substances of which trial had been made.

Eight cases were related in which iodine had been injected, and although in some of these the cure was incomplete, the report, regarding these cases as the only elements for the consideration of the radical cure of ascites by the injection of this substance, considers that they prove the operation to be one of very great value, and one which merits the attention of surgeons.

Out of the whole number of eighteen cases in which other agents were employed, fifteen were cured, two were unsuccessful, and one died.

The reporter, M. Morel, from the facts contained in M. Boinet's work, was disposed to favour this treatment, which otherwise he should have regarded as most dangerous. Looking, also, at the beneficial influence exerted by iodine on engorgement of the testicle, when injected for hydrocele, M. Morel was inclined to look for the production of similar effects on the visceral diseases which are the primary cause of ascites.

M. DEBOUT stated that a case in which this injection had been practised by M. Basin had ended fatally.

A discussion followed, in which it was observed that many most important points in the history of these cases, and in their subsequent treatment, must be more definitely ascertained before so hazardous a proceeding could be generally adopted.

Hospital and Infirmary Reports.

KING'S COLLEGE HOSPITAL.

*Hernia.**

ON Tuesday, April 16, Mr. Bowman operated in a case of hernia which presented some features of interest. The patient was an old woman, and exceedingly fat; consequently a very bad subject for any operative proceeding. It appeared that she had only observed the rupture to exist for the last six weeks, it having at first appeared as a small swelling in the groin. It had been strangulated since the previous Sunday, and when the patient was admitted on Tuesday morning she was suffering from constant vomiting: the taxis was applied, but unsuccessfully. Mr. Bowman therefore determined to operate at once, and accordingly, at 3 P.M., the patient was carried into the theatre and placed under the influence of chloroform. On exposing the tumor, it was so large and prominent, and its situation was so much that of an inguinal protrusion, that it was at first impossible to say to what class it belonged; but on cutting through the immense layer of fat, and the superficial fascia, it was at once discovered to be a femoral protrusion. After having freely divided these parts by one or two incisions, Mr. Bowman came down upon what at first looked like a portion of the protruded bowel in its sac, at the lower extremity of the wound, whilst some bands appeared to cross the hernia just above, and thus divide it into two

* We regret that owing to an accident the insertion of this report has been delayed.

portions; consequently, Mr. Bowman dissected cautiously through the layers which covered what was considered to be the hernia, and at the same time divided the bands which appeared to cross the tumor above, when it was at once discovered that the mass which was hitherto taken to be a part of the hernia was nothing more than a large portion of fat, so congested and changed as readily to assimilate itself to the appearance of a portion of protruded bowel in its sac, whilst the real protrusion was found to be lying at the upper portion of the wound, underneath the bands which had been cut. The sac of the hernia being now reached, was cautiously cut into, and immediately a very large quantity of bloody serum gushed out. On this being emptied out, a portion of small intestine of a chocolate colour, indicating a great amount of congestion, but not the slightest amount of gangrene or ulceration, was found to be the part strangulated; the knife was then carried cautiously upwards and inwards, and by this means the junction of Gimbernat's and Poupart's ligaments was divided, and after the separation of a few adhesions the intestine was readily returned: the wound was dressed, and the patient put to bed.

Mr. Bowman took this occasion to remark to the students, that at first sight this looked like an inguinal hernia from its size and position, but after making the first incisions it became evident that it was a femoral hernia, as the tendon of the external oblique muscle was not found to be covering the tumor. Another circumstance of interest in this case was his having at first taken to be the hernia itself what afterwards turned out to be a large portion of fat so changed from its usual appearance by congestion, that it looked like a part of the hernial tumor; and it was not until he had cautiously dissected through the tissues covering it, that he found out its real nature. It usually happened that small pellets of fat were met with around the tissues over a femoral hernia, and most probably this portion of fat was one of them enlarged and congested: it would be well for them to bear this incident in mind, as a mistake might be easily made, and some anxiety and trouble occasioned. They had seen that the intestine was excessively congested and of a very deep colour; but there was no evidence of any other disease in it, and he saw no reason why the patient should not make a good recovery.

Since the operation, this patient, notwithstanding her advanced age and great obesity, has been making satisfactory progress, although the constitutional irritation has been severe, and the sac of the hernia

has taken on the sloughing process; but no other portion of the wound at the tissues around have been affected.

April 27.—During the last two or three days a new and somewhat formidable symptom has set in; faeces have been found to come away from the wound, and there is a portion of intestine to be seen in a gangrenous condition. The general condition of the patient, however, is not materially altered: the pulse is feeble, and the tongue is very furred; but she takes her nourishment well, and she does not vomit.

Stricture of the Urethra, with Fistulous Openings in the Perineum and Abdomen; previous puncture of the bladder by the super-pubic method—Incision by the Perineum, and removal of a Calculus from the region of the neck of the Bladder.

We mentioned in our last report that amongst other cases of stricture at present in the hospital, was one which presented features of great interest; it was a case of impermeable stricture of the urethra, attended with fistulous openings in the perineum and abdominal walls; in which the bladder had some time previously been punctured above the pubis. The history of the case is as follows:—

Robert A.—, aged 25, a native of Lincolnshire, had always good health until within the last five years. About two years ago, whilst in the rigging of a ship, he fell across one of the yards upon the region of the perineum; he immediately afterwards suffered intense pain there, but this ceased in three or four hours; slight swelling then came on. He continued pretty well, and was able to work for a month after this accident, but at the end of this period his symptoms increased, and he had an attack of retention of urine, which lasted for ninety-eight hours, when his bladder was punctured above the pubes, and his urine was drawn off. A calculus was kept in his bladder for six months, and during the whole of this time he only passed a few drops of water by the natural passage. Soon after this operation leeches were applied upon the lower part of the belly, and two of the bites—one on each side—degenerated into fistulous openings, through which the urine came away. That on the right side closed in about twelve months, but that on the left remained patent, and still allows the urine to come away quite in a stream when micturition is performed. At the present time he has a stricture which commences about three inches from the external meatus, and extends along the greater portion of the urethral canal behind. There is a large

fistulous opening in the perineum which permits the urine to flow away: at the time that the operation of puncturing the bladder was performed, an incision was made into the perineum, but nothing beyond matter was let out. Six months afterwards urine came away through the opening left, and has continued coming so ever since. An instrument of the smallest size cannot be passed more than three inches down the urethra. The patient is in a truly deplorable condition; he is much wasted, and suffering from hectic; he is continually disturbed at night, being obliged to get up about every second hour to pass his water. A probe can be passed from the fistulous opening in the left side about three inches down to the pelvis, but no diseased bone is felt.

This was his condition when he was admitted about three weeks ago: as his health had got into a somewhat better condition, Mr. Fergusson determined to do something for the poor fellow, and on Saturday, April 20th, he was brought into the theatre, and was placed under the influence of chloroform. Mr. Fergusson then made an incision through the fistulous opening in the centre of the perineum, and carried the point of the knife into the urethra, and without any difficulty was enabled to pass a No. 8 gum catheter through this wound into the bladder, and draw off the water. Whilst he was doing this he fancied he struck against something unusual, and on further search a calculus was discovered lying in front of the neck of the bladder. A small scoop was immediately obtained, and by the introduction of this through the wound, and by the help of the finger, a calculus of the size of a large bean was extracted. A free passage being now made into the bladder, and the stone being removed, the patient was carried away to bed.

This is a peculiarly interesting case in more than one point of view: in the first place it shows the insufficiency of puncturing the bladder above the pubes when the seat of obstruction is in the perineum: in all probability in this case the urethra had been originally ruptured by the fall, or at all events had been materially injured, and the subsequent inflammation which had been set up had ended in effusion of lymph and thickening of the parts; stricture had ensued; and ultimately obstinate retention of urine from the same cause. Under these circumstances it would have been better had the bladder been relieved by cutting through the perineum and dividing the strictured portion of the urethra at the same time; but the surgeon in attendance preferred tapping the bladder above the pubes, a proceeding which was

only of temporary benefit, and one which left the actual seat of disease untouched, as evidenced by the state of the urethra, the fistula in perineo, and those in the abdominal walls.

The other feature of interest consisted in the presence of a calculus which was unexpectedly met with during the operation. There were no particular symptoms to lead one to suspect such an additional source of irritation. It is the opinion of Mr. Fergusson that the concretion lay in a kind of pouch in front of the neck of the bladder, which the urine escaping from the urethra had formed for itself: if such was the case, the absence of the peculiar symptoms of stone would be accounted for. It is by no means difficult to understand that a concretion might be formed in such a case as presented itself in this patient, in consequence of the retention of some of the urine in a sac or pouch in connection with the bladder, its natural outlet being obstructed. And the celebrated Le Dran has alluded to the possibility of concretions forming in such cases; for in his admirable essay "On the Fistula in Perineo," after describing their formation, he says—"Some of this urine passing through these orifices with difficulty, will lodge in the neighbouring parts, and hardening the flesh there, will produce callosities which afterwards increase very considerably. In proportion to the number of these callosities, and to the difficulty the urine meets with in passing, the water works itself new passages and forms new abscesses; and hence it comes to pass that we sometimes find urinary fistulae *extend even into the groins*. It is not a very uncommon thing to find stony concretions here, from the lodgment of urine in the flesh before it makes its way out through the fistulous openings;" and moreover, another remark, the same judicious author makes, well applies to this case, for after having spoken of the manner in which a cure of fistula is naturally produced after the urethra has been dilated by bougies, he says—"All these efforts of nature, however, cannot heal those fistulae when there are *stony concretions*. These cases require the assistance of art, and in order to effect a cure we must follow the general rule of enlarging the outward opening, to procure a passage for the extraneous bodies."

This patient has been doing well ever since the operation, and the benefits which are produced by it are strikingly shown: the urine comes freely away by the wound, consequently the patient is not harassed as he was by the constant desire of passing water, which caused him to rise frequently during the night, and robbed him of his rest; now, however, he is much less troubled in this way. He has already

gained flesh; his countenance has become more cheerful; his pulse has become firmer and full, and his appetite good.

On April 25th Mr. Fergusson attempted to pass an instrument through the strictured portion of the urethra, but he could only introduce the smallest about half an inch into the stricture. It is very evident that great patience will be required to overcome the long and firm stricture which exists: it is Mr. Fergusson's intention to apply Potassa Fusa.

Disease of the Antrum.

A very remarkable and interesting case of disease of this part of the upper jaw is at present in the hospital, under the care of Mr. Fergusson. The case has excited very much interest, inasmuch as the features it presented were such as to deter from a diagnosis being entertained as to whether the tumor was fluid, or was in fact a malignant affection of the upper jaw itself, requiring extirpation of the whole of that bone. The particular nature of the affection was not discovered until the patient had been brought into the theatre for the purpose of having the jaw excised if it should be found necessary. We will give a sketch of the history of this case.

The patient, aged 25, married, having four children, and living in the county of Kent; has always been rather weakly. About August last she first noticed a little lump in her right cheek; she was confined in October, and after this the tumor began to increase with some rapidity; she suffered hardly any pain in the tumor itself, but she complained of pain in the temporal and frontal region of the corresponding side, as well as down the neck and right arm. It reached its present size about three months since. She applied to a surgeon, who told her it was merely a gum-boil; but as it had latterly increased very much he requested her to go to King's College Hospital to have the advice of Mr. Fergusson. She was admitted about the beginning of April. On examination, a prominent tumor was found, involving the upper jaw on the right side: it appeared to be circumscribed, and not implicating the malar bone or orbital plate of maxilla. On looking into the mouth, the palate is seen to be bulging out, but not very extensively; the tumor protrudes much above the alveolar border of the superior maxilla. On placing the finger on this portion of the swelling inside the mouth it was felt to be very soft and painful; the right nostril appeared to be somewhat interfered with.

The patient looked thin and weak, and stated that she had lately lost flesh, and had been obliged to wean her child.

A few days after this patient had been

admitted she caught a severe attack of mumps, which prevented her from opening her mouth for a fortnight, therefore nothing could be done; but at the end of this period Mr. Fergusson was enabled to make a careful examination, and he found that the tumor had not increased in size, and that it had become less soft than it was at first: the patient had not declined in health, nor did she suffer much pain; consequently Mr. Fergusson thought that the tumor might be simply a collection of fluid, and in order to ascertain this he determined to puncture it with a grooved needle, but the patient was so very nervous that she would not permit of its being done. It was therefore determined that any exploring process should be delayed until the patient was placed under the influence of chloroform, and every thing should be ready for removal of the upper jaw if it should be found necessary.

On Saturday, April 27th, the patient being brought into the theatre, Mr. Fergusson made a deep puncture in the most prominent part of the tumor, just above the alveolar border of the jaw, and immediately a yellowish-coloured thick fluid issued out. It being now evident that the tumor was fluid (atleast in part) an incision was made through the gum, and the antrum more freely perforated, when an immense quantity of this thick fluid was discharged; it was evident now that the antrum was much distended and full of this fluid: a portion of bone, about half an inch in length, was now cut out with a strong pair of scissors, and the finger could be introduced into the cavity of the antrum, which was enormously dilated, and lined by its membrane; the whole of the fluid was got out, and the patient sent to bed, fortunately, from the wise precaution on the part of Mr. Fergusson first tapping the tumor, without the loss of her upper jaw: the orifice of the tumor was kept patent.

In the course of some remarks which Mr. Fergusson made to the students on this case, he stated that it was one of extreme interest, and that it would be a lesson to them all, inasmuch as it indicated the necessity of puncturing a tumor of the upper jaw and ascertaining its character before commencing the operation of removing that bone—one of the most serious operations in surgery. His suspicions had, as those who had been round the wards with him must have noticed, been roused regarding the true nature of the case: at first it had all the appearance of a fungoid tumor of the antrum; there was the equable expansion of the antrum, and the protrusion of the palate, which was generally well marked in such cases; still he so

strongly doubted, that he wished to puncture the tumor before giving any decided opinion, but as the patient would not consent to this he determined to place her under the influence of chloroform, and to have every thing ready for the excision of the upper jaw if this proceeding should be found necessary. They had seen the result, and it was both a fortunate thing for the patient and a great lesson for them all; for it would have been a serious thing if the incisions should have been made in the face, and afterwards the true nature of the tumor had been discovered. Such things had taken place; he himself had once seen an instance in which all the necessary incisions in the soft parts had been made for the removal of the upper jaw, and it was afterwards discovered that the tumor was nothing except a collection of matter within the osseum.

The fluid on examination was found to consist of a thick viscid matter, holding in suspension a great number of micaceous plates of cholesterine.

Medical Trials and Inquests.

THE APOTHECARIES' ACT AND THE COUNTY COURTS. ATTEMPT TO EVADE THE DECISIONS OF THESE COURTS.

Court of Exchequer, May 24.

MR. MARTIN and Mr. F. ROBINSON showed cause against a rule for a prohibition which had been obtained to stay the proceedings in a plaint for four penalties under the Apothecaries' Act (55th George III. chap. 184), which had been issued against the defendant in the county court of Cambridgeshire. The plaint was for £20, the amount of one penalty awarded by that act for practising without a certificate of the company, and the particulars stated that the defendant had done so on four different occasions and at four different places. It was contended for the defendant that these particulars disclosed four different causes of action or penalties of £20 each, so that the plaint was in fact for £80—a sum far beyond the jurisdiction of the county courts. In answer to this it was argued that, though four instances were specified, the plaintiffs did not seek to recover in respect of more than one, and the names of the four patients were given in the particulars in order that the defendant might have notice of the occasions on which he was charged with having contravened the law. It did not follow that each case involved the forfeiture of £20, and it had been ruled under the

Sunday Trading Act that a trader did not incur a penalty for every isolated act of trading.

MR. NAYLOR, in support of the rule, submitted that the cause of action here was clearly more than £20. Each act was a separate offence under the statute in respect of which a penalty of £20 was awarded, one-half of which went to the informer. The particulars set out four separate and distinct acts of illegal practice at different times and places, and there could be no doubt that the plaintiffs could sue for four penalties if their particulars were correct.

MR. BARON ALDERSON.—The particulars may mean simply that the plaintiffs would rely for the recovery of £20 on any one of the four cases there specified; not that they went for each and all of them, which they clearly could not do. The cause of action was not divided, for a distinct sum of £20 attached to each act, and having proved one the plaintiffs would abandon the rest.

MR. NAYLOR submitted that the abandonment of the excess ought to have been shown on the particulars in order to give jurisdiction, but

The COURT was unanimously of opinion that the rule ought to be discharged, as the county court had jurisdiction in such a case. The particulars might be ambiguous, but the plaint was distinctly limited to one for £20. Even if the demand be for more than that sum, the Court had jurisdiction up to £20, if the plaintiff will abandon the excess. Unless, however, the cause of action be for more than £20, there is no necessity for any abandonment.

Rule discharged.

INCREASE OF WATER-CURING DEPOTS IN THE UNITED STATES.

ON the west bank of Mill River, two and a half miles from Northampton Centre, Mass., a new water-curing establishment has been opened by a Dr. Charles Munde, who claims to have been one of the earliest disciples of Priessnitz. The circular says that "persons desirous of following a course of treatment should provide themselves with two or three woollen blankets, two comforters, some linen sheets, some towels, some old linen, and a couple of pillow-cases." (Why are the usual boarding-school requisites, "a knife and fork and a silver spoon," omitted?) Why not transport the entire household at once? There are now three of these water hospitals in that town. At the present ratio of increase Northampton will soon be in a state of perfect liguefaction.—*Boston Journal.*

Medical Intelligence.

MEMORIAL FROM THE NATIONAL INSTITUTE.

To the Right Hon. Sir George Grey, Bart.,
Her Majesty's Principal Secretary of
State for the Home Department, &c. &c.

SIR,—The Council of the National Institute of General Practitioners in Medicine, Surgery, and Midwifery, beg again to address you on the subject of medical affairs, and they respectfully offer a few additional observations for your consideration, with a view to explain certain statements, to correct a few inaccuracies, and more especially to point out some most important points of agreement in the Memorial of the Provincial Medical and Surgical Association, when compared with the principles advocated by the National Institute.

The Council of the National Institute respectfully represent—

1st. That the provincial physicians and pure surgeons having distinct and separate interests, however competent to advise on matters relating to their own Colleges, are neither proper authorities or parties sufficiently disinterested to advise or interfere with the education or the examinations of the general practitioners; and the Council of the National Institute have reasonable grounds for believing that the representations made by the Provincial Medical and Surgical Association are not entitled to be considered the 'legitimate opinions, or as advocating the true interests of the general practitioners in medicine, surgery, and midwifery.

2d. That the district meetings of the members of the Provincial Medical and Surgical Association, alluded to in their Memorial, were very scantily attended, thirty-two persons only having attended the meeting at Bath, seventeen of whom were either physicians or pure surgeons. At the North Wales Branch, held at Wrexham, fourteen persons attended; whilst at Shrewsbury there attended but ten or eleven. The attendances at the other branches being of a similar character, as to composition and numbers, are yet held up in the Memorial as representing the opinions of the general practitioners of England!

3d. The Memorial recently presented to the Right Hon. the Home Secretary by the Society of Apothecaries very explicitly states the conditions upon which they would be prepared to surrender the examinations in medicine, &c., and those conditions are quite at variance with what is

inferred in the Memorial of the Provincial Medical and Surgical Association.

4th. The unanimity of the Provincial Medical and Surgical Memorialists in opposing the establishment of a new College of General Practitioners, assuming this to be, as stated, the opinion of the district meetings (an assumption by no means well authenticated) cannot in the slightest degree invalidate the evidence afforded by the National Institute, that a new and independent College is the deliberate and most anxious desire of a vast majority of the general practitioners in town and country; and the Council of the National Institute, having obtained the medical statistics of various localities from whence petitions have emanated, take the liberty of stating that at Croydon, for instance, where an influential member of the Provincial Medical and Surgical Association (Mr Bottomley) resides, they discover that, out of fourteen medical practitioners residing in that town, thirteen have subscribed their names to a petition praying for a new College, one individual only dissenting, and that one being Mr. Bottomley himself.

5th. To the principles contained in the aforesaid Memorial of the Provincial Medical and Surgical Practitioners, and which are considered by the Memorialists as the only principles for legislation on medical affairs which would be satisfactory to the profession—namely, the principle of uniform and efficient qualification in every branch of medical science, with equal rights for all persons so qualified to practise throughout her Majesty's dominions, and the adoption of the representative principle in the formation of the governing Councils of the respective Colleges, so far as they apply to the great body of the profession—the general practitioners,—the Council of the National Institute give their unqualified approval: they are points upon which the entire body of the general practitioners are quite agreed, and their opinions have been so expressed and most strenuously insisted upon by every party assuming to represent them;—by the Society of Apothecaries,—by the Provincial Medical and Surgical Association,—and more especially by a large preponderance of the general practitioners of the kingdom expressing their sentiments through the National Institute of Medicine, Surgery, and Midwifery. As the supporters, therefore, of a high and efficient standard of qualification for all persons exercising the onerous and important duties that daily devolve upon the medical profession, the general practitioners are unanimous.

The National Institute, on the part of the general practitioners, repudiate the assumption laid down by the Council of

the College of Surgeons, that "the infallible consequence of raising unduly the standard of education would be practically the evasion of any qualification, and the surrender of the poorer classes, under any surgical emergency, into the hands of the vendors of drugs and other uneducated persons." The Council of the National Institute unhesitatingly affirm that such an assertion is quite at variance with all experience; and that, if it should unfortunately so mislead her Majesty's Government as to induce it to legislate upon such a principle, it would prove the greatest impediment to the progress of science, and be highly detrimental to the public interests.

I have the honour to be, sir,

Your most obedient servant,

NATHANIEL CLIFTON,
Vice-President.

The National Institute of Medicine,
Surgery, and Midwifery,
May 16, 1850.

PATENT WATER DRESSING.*

THIS material is intended for the application of lotions, either simple or medicated, to ulcerated surfaces, and is found to possess many advantages over the remedies commonly employed in these cases: among them are its retention of moisture, and non-irritating action on the surrounding skin.

* * We have examined the material, and consider it to be well adapted for the intended purpose.

UNIVERSITY COLLEGE HOSPITAL.

THE seventeenth anniversary festival in aid of the funds of this hospital was celebrated at the London Tavern on the 23d instant, where a splendid entertainment was provided. His Royal Highness the Duke of Cambridge presided, supported by Lord Brougham and others. It was stated that during the past year the number of poor relieved had been 20,583—of whom 1,364 were in-patients, 4,038 out-patients, 675 women in childbirth attended at their own habitations, 501 ophthalmic cases, and 14,010 casualties. The Chairman said it was with regret he found that the hospital was deeply involved, that last year the expenditure had exceeded the income by £500, and that the present debt upon the institution was about £3000. The subscriptions received in the room amounted to £2,100, including £20 from the Duke of Cambridge, £10 from Lord Brougham, and the munificent donation of £1000 from the Rev. Deacon Morrell. The hospital is capable of containing 200 patients, but for want of means the number is limited to 120.

* Manufactured by the Epithem Company, 22, King William Street, City.

LETTER FROM THE MEDICAL ASSOCIATIONS TO THE PRESIDENT OF THE COLLEGE OF SURGEONS.

SIR,—On behalf of the Medical Reform Associations represented by the deputation to Sir George Grey on the 2d inst., I have to acknowledge the receipt of a communication from you, intended as a reply to the several memorials previously presented to the Council on the subject of a new charter.

I am desired to inform you that on the 2d May the communication in question (copies of which were at that time in possession of the delegates assembled in conference at Morley's Hotel), was very fully considered by them, and unanimously pronounced to be insufficient in its concessions, and therefore unsatisfactory and unjust. This opinion they embodied in the proposals submitted to Sir George Grey, a copy of which I have now the honour of forwarding to the Council.*

In the discussions and correspondence that have subsequently taken place amongst the members of the several associations, they have seen no reason to deviate in any degree from the spirit of previous resolutions.

Finally, I am requested to state, that the most friendly disposition towards the College exists on the part of the physicians and surgeons represented by the deputation of the 2d May, and that an anxiety to prevent the incorporation of a rival institution is not the least amongst the motives actuating them in the course they have pursued and intend to continue.

I have the honour to be,

Your very obedient servant,

WM. WATSON BEEVER,
Chairman.

The President of the Royal College
of Surgeons of England.
Manchester, May 20, 1850.

ROYAL ORTHOPÆDIC HOSPITAL.

THE anniversary festival of this institution was held last week at the Freemasons' Tavern, and was presided over by the Earl of Cardigan. There was a very large attendance of gentlemen on the occasion. It was stated more than once during the proceedings, that 10,000 patients have since the foundation of the Hospital been relieved in it, and that out of this large number not one death has occurred from the mode of treatment pursued, nor has there been any instance of permanent suffering or injury. The average daily attendance of out-patients exceeds 100, the total number in regular attendance exceeds 700, and the new cases presented weekly are from 20 to 40. The committee of management are actively en-

* The proposals have already appeared in this journal.

gaged in extending the amount of their indoor accommodation; they have at present 36 beds, and the treatment pursued embraces not only the cure of club feet, but all other contractions and deformities, especially lateral curvature of the spine. The list of subscriptions announced by the secretary amounted to £1,036, and included a contribution of 250 guineas from Her Majesty, on behalf of his Royal Highness the Prince of Wales.

LONDON AND WESTMINSTER MEDICAL SOCIETY. LIST OF OFFICE-BEARERS FOR 1850-1.

THE office-bearers of the Society, chosen from the amalgamated Societies of London and Westminster, are as follow:—*President*: J. Risdon Bennett, M.D. *Vice-Presidents*: W. H. Willshire, M.D.; F. Hird, Esq.; J. F. Clarke, Esq.; A. B. Garrod, M.D. *Treasurer*: N. Clifton, Esq. *Secretaries in Ordinary*: W. Cogswell, M.D.; C. H. F. Routh, M.D. *Secretary for Foreign Correspondence*: Dr. Davidson. *Members of Council*: John Bishop, Esq.; W. D. Chowne, M.D.; W. C. Dendy, Esq.; H. Hancock, Esq.; E. Headland, Esq.; J. Middleton, Esq.; G. Pilcher, Esq.; W. Smith, M.D.; Silas Stedman, Esq.; Theophilus Thompson, M.D.; E. W. Murphy, M.D.; F. Sibson, M.D., F.R.S.; S. W. J. Merriman, M.D.; W. Tyler Smith, M.D.; W. Harvey, Esq.; B. Travers, jun., Esq.; E. Lankester, M.D., F.R.S.; J. R. Cormack, M.D.; E. Canton, Esq.; R. Greenhalgh, Esq. The amalgamated Societies have taken extensive rooms in George Street, Hanover Square.

THE YELLOW AND TYPHUS FEVERS AT RIO JANEIRO.

ACCORDING to intelligence from the capital of the Brazils, it appears that an epidemic fever was raging there with fury, especially among foreigners and the crews of European vessels. Some have described this as the yellow fever; others as a variety of the African coast fever, probably brought by a ship. Its progress had been most fatal. A number of houses of business were closed, in consequence of the deaths of those who directed them. Several ships had lost their entire crews, and even their officers. Three Hamburgh merchant-vessels, among others, had been compelled to put to sea under American captains. The Emperor had been attacked with the prevailing malady, but was convalescent at the last despatches. Unfortunately the epidemic has not confined its ravages to Rio Janeiro, but had already extended itself to Pernambuco and Rio Grande do Sul.—(*L'Opinion Publique*.) At Rio Janeiro nearly 1800 persons had been carried off; 3000 at Bahia; 500 at Paraíba; 500 at Macocio; some at Santos; and 4000 at

Pernambuco. Of the latter 300 were seamen, 83 being British. After the second month the number of attacked diminished, but the proportion of deaths increased. The disease was on the decrease according to the last reports.

M. MALGAIGNE.

WE have omitted to state that lately, after a "brilliant" *concours*, which had lasted upwards of four months, for the chair of Operative Surgery at the Faculty of Medicine of Paris, vacant by the death of M. Blandin, the professorship had fallen to the lot of M. Malgaigne, surgeon of the Hôpital Saint-Louis. There were nine other competitors for the appointment.

DEMONSTRATIVE MIDWIFERY. INSTITUTION OF PARTURIENT CHAMBERS FOR THE INSTRUCTION OF PUPILS.

IT would seem, by an article in the Buffalo Medical Journal, that the professor of midwifery in the medical department of the university of that place, has received a rebuke from some few of the medical gentlemen there, for illustrating his lectures with the living subject. We regret the opposition that has been manifested to this measure, knowing well that it was for educational purposes alone that the professor adopted it, and not being able to see any impropriety in it. To argue that it is "wholly unnecessary for the purposes of teaching, unprofessional in manner, and grossly offensive, alike to morality and common decency," would be taking a position that might be expected from the opposers of science, but is entirely at variance from what should be expected of the profession. It is a truthful saying, "that the complexion of sentiments does not depend upon the avenue through which fostering sensations are received, but on that principle which perceives and feels—the mind." *Honi soit qui mal y pense*. These gentlemen must know well the value of clinical instruction, and should be the last to oppose a measure which would, in a comprehensible manner, elucidate the phenomena of a vital function. If such proceedings had never before occurred, and the professor was establishing a precedent, even then such manifestations would be uncalled for. We hold that an instructor has a right to adopt any proper measure that will best secure the purpose which he is endeavouring to accomplish. In this country such proceedings may be comparatively new; but we know well that at the *Maternité* in Paris, and, in fact, at most of the lying-in hospitals of Europe, they are common. In the University School of Medicine in New York, in which Dr. Bedford is professor of the department of obstetrics, is endorsed the value of such instruction, and Dr. B. mentions in his preface to the

work translated by him (Chailly), that he has established for the benefit of his class, a clinique, and on the third year of its existence had been able to furnish his pupils with 740 cases. In the case of the professor of the University of Buffalo, he conceived a plan by which he could illustrate, to the graduating class, their duties in the parturient chamber. The patient was in the College, in the apartments of the janitor, whose wife was in constant attendance throughout the labour. The students were called upon singly to attend the patient, the professor being present to aid and give them counsel. In a few weeks afterwards these same gentlemen received their diplomas as doctors in medicine, and were likely soon to be called upon in similar cases. So much for the innovation from ancient custom that is complained of in this case; and for our part, we think the professor deserves the approbation of the students and the profession, for his endeavours to make the instruction in his department as practical as possible. — *Boston Medical Journal*.

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 17th instant:—Messrs. G. H. Beaman, J. H. Lilley, G. Down, E. P. Beverly, E. Haycock, J. C. Barry, T. N. Brushfield, J. D. Cleston, T. Sarvis, H. P. Leman, J. J. O'Donnell, A. Beckett.

Admitted on the 25th.—Messrs. H. F. Coley, J. A. Haynes, S. D. M'Morris, F. G. Joynt, T. C. Skinkwin, J. Paterson, A. R. Lomax, W. Jones, H. Folkard, J. W. R. Amesbury, D. M'Mntyre.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, the 23d of May:—William Milthorpe Spence, Otley, Yorkshire—Trevor Morris, Chepstow, Monmouthshire—Samuel Snee Larcombe, Langford, Somersetshire—Major Charles Dukes—William Cockcroft, Colne, Lancashire—James Paterson, Glasgow—Samuel Alderson, Plumbe.

OBITUARY.

DR. CHARLES CANSTATT.

THIS eminent member of the profession, who was professor in the Faculty of Medicine at Erlangen, and well known by his contributions to German medical literature, died recently at Erlangen, at the age of 43.

DR. ALARD.

We have also to announce the death of M. le docteur Alard, Member of the Academy of Medicine, and Physician in Chief to the Institution of the Legion of Honour at St. Denis.

BIRTHS & DEATHS IN THE METROPOLIS

During the Week ending Saturday, May 25.

BIRTHS.		DEATHS.	
Males....	676	Males....	459
Females..	666	Females..	407
1342		866	

CAUSES OF DEATH.

ALL CAUSES	866
SPECIFIED CAUSES	855
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	156
Sporadic Diseases, viz.—	
1. Dropsy, Cancer, &c.	48
2. Brain, Spinal Marrow, Nerves, and Senses	102
4. Heart and Bloodvessels.....	36
5. Lungs and organs of Respiration	128
6. Stomach, Liver, &c.	57
7. Diseases of the Kidneys, &c.	6
8. Childbirth, Diseases of Uterus, &c.	9
9. Rheumatism, Diseases of Bones, Joints, &c.	6
10. Skin.....	3
11. Old Age	39
12. Sudden Deaths.....	19
13. Violence, Privation, Cold, &c....	33

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox.....	8	Convulsions.....	27
Measles.....	24	Bronchitis.....	60
Scarlatina.....	13	Pneumonia.....	49
Hoooping-cough.....	35	Phthisis.....	135
Diarrhoea.....	11	Lungs.....	10
Cholera.....	0	Teething.....	10
Typhus.....	33	Stomach.....	8
Dropsy.....	18	Liver.....	22
Hydrocephalus.....	23	Childbirth.....	6
Apoplexy.....	24	Uterus.....	3
Paralysis.....	19		

REMARKS.—The total number of deaths was one above the average mortality of the twenty-first week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer	30.46
Thermometer.....	55.5
Self-registering do.	Max. 98.3 Min. 51.

• From 12 observations daily. • Sun.

RAIN, in inches, 0.47.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 1.5° above the mean of the month.

NOTICES TO CORRESPONDENTS.

The necessity of publishing two Lectures weekly in order to complete the series commenced in the present volume, has contracted our space for original communications. We hope, however, to recover these arrears. The papers of Dr. Soltau and Mr. Smith are in type.

The letters of Senex and Mr. J. Scott will be published next week.

The communication in Dr. Tilt's note shall be attended to in the notice of the work.

RECEIVED.—The King's College Hospital Report.

Notice.—We have to request that all ADVERTISEMENTS may be addressed directly to MESSRS. LONGMAN AND CO. Paternoster Row, and marked on the outside "ADVERTISEMENT." Great delay in the insertion has arisen from their having been addressed to the EDITOR of the Journal.

Lectures.

LECTURES

ON INFLAMMATION,

(Delivered in the Theatre of the Royal College of Surgeons of England).

BY JAMES PAGET,

Professor of Anatomy and Surgery to the College.

LECTURE I.

Inflammation to be studied as an altered mode of nutrition in a part—Description of the inflammatory state as affecting the several parts chiefly engaged in the process of nutrition—namely, 1st, the Blood-vessels; their enlargement and fulness, producing redness and swelling; their change of shape, and aneurismal dilatations—2nd, the Blood; its mode of movement, especially as observable in the wings of bats, after injury and the application of stimuli; its partial stagnation; its apparent changes; crowding of its red corpuscles; assumed accumulation of its white corpuscles; general effects of the changes of the retarded or stagnant blood—3rd, the Nerves; their state, as indicated by pain, and disturbance of the act of nutrition; transference of this state to other nerves, generating certain forms of sympathetic inflammation—4th, the proper elements of the inflamed part; their influence in determining the phenomena of inflammation; their defective nutrition during the process.

MR. PRESIDENT and GENTLEMEN.—In pursuance of the plan which I have followed in former years, of endeavouring to illustrate the successive series of specimens in the Pathological Museum, I come to the subject of Inflammation. Considering the difficulty of the questions to be discussed, I might gladly have avoided them; but the remembrance of the indulgent attention I have received in former years makes me bold to attempt even this subject also; and the more readily, because, certainly, in the whole range of pathological study, none can be compared with it in either interest or importance. It is no more than the truth which Mr. Travers has well expressed in his work on the "Physiology of Inflammation and the Healing Process"—"that a knowledge of the phenomena of inflammation, the laws by which it is governed in its course, and the relations which its several processes bear to each other, is the key-stone to medical and surgical science."

XIV.—1175. June 7, 1850.

I shall not attempt to define inflammation in any set terms; for as yet we are not, I think, in a position to do this. Just definitions cannot be made in any science till some of its broad and very sure principles have been established. Such principles we cannot boast to have yet attained in the study of pathology; and the attempts at precise definitions that have been made hitherto, seem to have led only to confusion, or to false and narrow views of truth. Besides, to define inflammation is the less necessary, because, practically, we all know sufficiently well what the term implies: we know the signs of the presence of the disease in all its chief forms; and, when we watch these signs in any external part, we see them so often followed by peculiar changes in the part, that we are justified in recognizing the changes as effects of inflammation, and in believing that wherever we find them, the similar or corresponding signs of inflammation have preceded them.

But the very difficulty of exactly defining the process of inflammation may be our guide to the most hopeful method of investigating it. When we see such gradual transitions, from the normal process of nutrition to the disease of inflammation, that we cannot draw a definition-line between them, we may be sure that the main laws of physiology are the laws alike of the disease and of the healthy process; that the same forces are engaged in both; and that though interfered with by the conditions of the disease, they are not supplanted or annulled.

Now, such transitions from the normal processes to that of inflammation are not rare. We may trace them, for example, in the gradual passage from the active exercise of the brain, or of the retina, to its "irritation" when overworked, and thence, to its complete inflammation and impairment of structure, after long exposure to what had been a natural stimulus, or to what, in a less degree, might be so. Or, on the introduction of medicines, such as certain diuretics, into the blood, we may trace gradations from the normal increase of the functions of the kidneys, under what is regarded as no morbid stimulus, to their intensest inflammations. Or, again, in the application of an abnormal stimulus, such as that of a heat greater than the natural temperature of the body, where shall we mark the line at which inflammation begins to supervene on health? We may, indeed, say that stagnation of blood, or effusion of liquor sanguinis, shall be the condition *sine qua non* of inflammation; we may call whatever falls short of these, "active congestion," "irritation," or by any other name; but in practice, such distinctions are

often impossible, and sometimes untrue, and in study, the terms are convenient for the sake of brevity rather than of clearness.

Evading, then, the question of the precise definition of inflammation, I shall endeavour, first, to describe the state of an inflamed part, giving to the description such a plan and direction as may best help the chief design of contrasting the inflammatory, with the normal, method of nutrition, and of showing that the immediate causes, and the chief constituents, of the inflammatory state are to be found in alterations of those things which are necessary conditions of the healthy nutrition of a part.

The conditions of the healthy maintenance of any part by nutrition, are—1st, a regular and not far distant supply of blood; 2d, a right state and composition of that blood; 3d (at least in most cases), a certain influence of the nervous force; and 4th, a normal state of the part in which nutrition is to be effected.* All these are usually altered in inflammation.

I. The supply of blood to an inflamed part is altered both by the changes of the blood-vessels, especially by their enlargement, and by the mode in which the blood moves through them.

The enlargement of the blood-vessels is, I suppose, a constant phenomenon in the inflammation of a part; for, although in certain parts, as the cornea, the vitreous humour,† and the articular cartilages, some of the signs or effects of inflammation may be found where there are naturally no blood-vessels, yet I doubt whether these ever occur without enlargement of the vessels of the adjacent parts, and especially of those vessels from which the diseased structure derives its natural supply of nutritive material, and which may therefore be regarded as being its blood-vessels, not less than those of the part in which they lie. Thus, in inflammation of the cornea, the vessels of the sclerótica and conjunctiva are enlarged, and in ulceration of articular cartilages, those of the surrounding synovial membrane or subjacent bone.

The enlargement usually affects alike the arteries, the capillaries, and the veins of the inflamed part; and usually extends to some distance beyond the chief seat or focus of the inflammation. To it we may ascribe the most constant visible sign of inflammation,—the redness, as well as much of the swelling. Its amount is various; it may be hardly perceptible, or it may increase the vessels to twice or three times

their natural diameter. Extreme enlargement is admirably shown in Hunter's specimen* of the two ears of a rabbit, of which one was inflamed by thawing it after it had been frozen. "The rabbit was killed when the ear was in the height of inflammation, and, the head being injected, the two ears were removed and dried." A comparison of the ears, or of the drawings from them, shows all the arteries of the inflamed ear three or four times larger than those of the healthy one, and many arteries that in the healthy state are not visible, are, in the inflamed state, brought clearly into view by being filled with blood.

I have repeatedly seen similar enlargements of both arteries, and veins, and capillaries in the stimulated wings and ears of bats. The like phenomena occur in the webs of frogs, and other cold-blooded animals; but in these, I think, the amount of enlargement is generally less.†

The redness of an inflamed part always appears more than is proportionate to the enlargement of its blood-vessels; chiefly, because the red corpuscles are much more closely crowded than they naturally are in the blood-vessels. The vessels of an inflamed part are not only dilated, but appear crammed with the red corpuscles, which often lie or move almost as if no fluid intervened between them: their quantity appears increased in far greater proportion than that of the liquid part of the blood.

This peculiarity is even more manifest in the frog than in the bat; for in the former, the crowding of corpuscles may occur in vessels that appear to have undergone no change of size on the application of the stimulus.‡

Another, but a minor, cause of the increased redness of the inflamed part is sometimes to be observed in the oozing of the colouring matter of the blood-corpuscles, both into all the interspaces between them, and through the walls of the small vessels into the adjacent tissue. During life this may be noticed, especially

* Pathological Museum of the College, No. 71. Catalogue, vol. i. p. 33. See also Hunter's Works, Vol. iii. p. 322, and Pl. xx.

† Emmert, who is among the few that have measured it, says it is equal to one-half or one-third of the normal diameter of the vessels. Bidder denies it altogether. See Henle's and Pfeufer's Zeitschrift, B. ii. and iv.

‡ I do not more particularly refer to what is described as the encroachment of the red blood-corpuscles on the lymph-spaces, or the layer of fluid that lies in apparent rest adhering to the walls of the vessels. The too-pointed description of this layer has led to very exaggerated notions concerning it: its existence is certain, but it is too thin for any blood-corpuscle to lie at rest in; and when white corpuscles remain by the walls of the vessels, it is evident that they do so more because of their own adhesiveness than because a small portion of the fluid about them is at rest.

* See Lectures on Nutrition, &c., in the MEDICAL GAZETTE, 1847.

† See, especially, a case by Mr. Bowman, in his "Lectures on the Eye," p. 124.

when the blood is stagnant in the vessels, and it may give them a hazy, ruddy outline, but it is generally much more considerable after death, when we may ascribe to it no small portion of the redness that an inflamed part may still present.

In the state of inflammation no new blood-vessels are formed. Many more may come into view than were at first seen in the part; but these are only such as were invisible till the flood of blood-corpuscles filled and distended them. So it was in the rabbit's ears; in the healthy ear no trace can be seen, with the naked eye, of any vessels corresponding with one of the largest, or with many of those of inferior size, in the inflamed ear. So it is, too, in microscopic examinations. Within half an hour after stimulating a bat's wing, many vessels may come into view which could not be seen before, and with which none can be seen corresponding in the other wing, though doubtless such vessels exist there of smaller size.

It is only when the inflammation has subsided, and the lymph exuded from the blood-vessels begins to be more highly organised, that new vessels are formed, and pass into the lymph, as if for the maintenance of its increase or development.* So long as the inflammation lasts, the intensest redness in parts naturally colourless,—even such as we see in acute inflammation of the conjunctiva, or yet more remarkably in those of peritoneum,† or in congestion of the stomach,—is due to the enlargement of the natural blood-vessels, to their admitting crowded red corpuscles, and in a much less degree, and, perhaps, in only certain cases, to the diffusion of the colouring matter of the blood.

With the enlargement of the blood-vessels a change of shape is commonly associated. Being usually elongated as well as dilated, they are thrown into curves and made more or less wavy or tortuous. Thus we may see the larger vessels in an inflamed conjunctiva,—or, more plainly, the subperitoneal arteries in cases of peritonitis; so, too, they are represented in the inflamed rabbit's ear.‡

A more remarkable change of shape of the small vessels of inflamed parts is that in which they become aneurismal or varicose. The first observations of this state

were published, I believe, by Kölliker and Hasse, in an account of a case of inflammatory red softening of the brain, in which many of what, at first sight, appeared to be points of extravasated blood, proved to be dilations of capillary vessels filled with blood. After this they found the same changes, but in a much less degree, in some cases of inflammation artificially excited in the brains of rabbits and pigeons.* Many, as well as myself, have since made similar observations, most of which, however, seem to show that the peculiar dilatation has its seat in the small arteries, not in the capillaries of the inflamed part. The diagrams illustrate some of the dilations observed in vessels of the brain by Kölliker and Hasse; and of those seen by Bruch† in the peritoneum of a dog after a wound in the abdomen; one from a specimen of diseased ovary, described by Professor Harting, and given to me by Dr. Van Leeuwen; and some from a case of inflammation, or extreme congestion of vessels, in a fringe of false membrane on a pericardium. The several figures represent various forms and amounts of partial dilatation. Some are like gradual fusiform dilations of the whole circumference of the vessel; some like shorter and nearly spherical dilations of it; some like round, or oval, or elongated pouches, dilated from one side of the wall: in short, all the varieties of form which we have long recognised in the aneurisms and aneurismal dilations of the great arteries may be found in miniature in the small vessels of such inflamed parts.

Frequently, however, as this state of the small vessels has been observed (and I believe some measure of it may be found in the inflammations of most membranes), yet, I think, we may not assume it to have a necessary or important connection with the other phenomena of inflammation. It may be as a mere accident to the inflammatory process, and due to some weakening of the vessels, which renders them unable to resist uniformly the increased pressure of the blood; or, perhaps, in some cases, as Mr. Quekett has suggested to me, the pouch-like dilations may represent a disturbed effort for the production of new blood-vessels by dilatation, or out-growth of the walls of those already extant.

Such is the ordinary state of the blood-vessels of an inflamed part: all dilated and elongated, tensely filled with blood, of which the red corpuscles are in excess,

* Mr. Hunter held this opinion; but more lately the contrary one has been commonly held. See his Works, vol. iii. p. 322.

† As illustrated in Mr. Stanley's plates, plate vii. fig. 1, which represents a specimen in the Museum of St. Bartholomew's, Series i. No. 195: the whole inner surface of the inflamed peritoneum of a tibia is bright scarlet.

‡ Sometimes such tortuosity makes the vessels appear varicose, as in a case by Reichert, in Müller's Archiv, 1847.

* See, regarding all the cases, Kölliker's paper in his Zeitschr. für wissenschaftl. Zoologie, B. i. S. 262, et seq.

† Henle and Pfeuffer's Zeitschrift, Bd. v. S. 65, and Taf. i.

often wavy and tortuous, and sometimes variously aneurismal.

But the supply of blood to an inflamed part is affected by its mode of movement, as well as by the size of the blood-vessels; this, therefore, I must now describe.

Nearly all the observations hitherto recorded on the morbid changes in the movement of the blood have been made with the webs of frogs; and it has been objected that it is not safe to apply conclusions drawn from them to the case of warm-blooded animals. I have therefore employed in my recent observations the wings of bats, in which (when one has acquired some art in quieting them with chloroform or gentle management) nearly all the phenomena of the circulation, as affected by the application of stimuli, may be watched as deliberately as in the frog, and in some respects even more clearly.

I think we may believe that what may be seen in the wings of bats occurs, in the like circumstances, in all warm-blooded animals. It is true that, like the other hibernants, the bats, while they are in their winter-sleep, resemble the cold-blooded animals, in that their temperature is conformed to that of the external air, and scarcely exceeds it. It is true, also, that when they are ill nourished, their temperature, even in their active state, is comparatively low, ranging from 65° to 80° F., in an atmosphere of 60°; and that generally they are liable to much greater diversities of temperature than our own bodies are.* Yet, since in the development of their nervous system, and the commensurate development of their heart and respiratory organs, and in the close reciprocal relations

in which these act, the bats resemble the other warm-blooded vertebrata, we may, I think, fairly assume a close resemblance also in their processes and conditions of nutrition; especially we may assume that this resemblance exists while they are in their active period of life, and in good health, as those were in which nearly all my observations were made.

Before describing the effects of irritation, it may be well to point out a peculiarity in the arrangement of the blood-vessels of the bat's wing. The principal arteries and veins lie side by side at each border of the metacarpal bones and phalanges, and the intervening membrane contains their numerous branches and capillaries. But, very generally, the arteries of the second and third order of branches pass into veins of corresponding size, without any intermedium of capillaries. The capillaries are rather in the position of off-sets from the continuous channels of arterial and venous loops, than in their more ordinary relation as intermediate canals, leading from arteries to veins. I know not to what this condition may have reference, or what purpose it may serve; but, in relation to the phenomena of inflammation, it appears to have no other effect than that, through the abundant anastomosis, a great obstacle to the movement of the blood is scarcely likely to occur.

The simplest effects upon the blood-vessels are produced by a slight mechanical stimulus. If, as one is watching the movement of blood in a companion artery and vein, the point of a fine needle be drawn across them three or four times, without apparently injuring them or the membrane over them, they will both presently gradually contract and close. Then, after holding themselves in the contracted state for a few minutes, they will begin again to open, and gradually dilating, will acquire a larger size than they had before the stimulus was applied.

Simple as this observation is, it involves some cardinal facts in our pathology. It illustrates, first, the contractile power of both arteries and veins; and, by the manner of their contraction, which follows at some interval after the application of the stimulus, and is slowly accomplished, it shows that their power of contraction is like that of parts with simple or organic muscular fibres. And one may notice here the illustration of the stoppage of hæmorrhage from small vessels. In one cut we may divide a hundred such vessels as these on the surface of a stump, and they may cease to bleed in a few seconds: doubtless, the very stimulus of the knife, while dividing them, has made their walls contract and close.

* For instance, I found the temperature of a strong and active Noctule-Bat (*Vesperugo Noctula*) thus various in two days:—

April 20th, at noon, after he had been nearly two hours under the influence of chloroform, and on awaking had been struggling very actively, his temperature was 90° F. At 9 P.M., having meantime been quiet, hanging by his hind feet, and looking sickly, his temperature was only 70°. When disturbed he became very fierce and active, shrieking and biting the bars of his cage; and at 9h. 40m. his temperature was 92°. Soon after this he became quiet again, and at 10h. 30m. his temperature was 90°. The temperature of the atmosphere during these examinations had gradually increased from 61° to 67°.—April 30th, at 8 A.M., he was feeble, but not torpid: the temperature of the room during the night had been between 40° and 45°, and was now 57°; the temperature of the bat was only 59°. At 11 A.M., after struggling violently for half an hour, it rose to 62°. After being long under chloroform, and nearly dying, he remained all the afternoon only one or two degrees warmer than the atmosphere. Bat at night, at 12h. 15m., he recovered and became active, and, while the atmosphere was at 65°, he was at 85°. At 12h. 40m., after being made very fierce, he was at 90°; and at 1h. 30m. remained at 85°. Next morning he was again scarcely warmer than the atmosphere. The temperature was always taken with a small thermometer applied to the surface of the abdomen.

But, again, the experiment shows the vessels reopening and becoming wider than they were before, either yielding more to the pressure of the blood which previously they resisted with more strength, or else dilating, as of their own force, with that which Mr. Hunter called active dilatation, and compared with the act of dilatation of the os uteri. In whichever way the dilatation is effected, whether it be active or passive, the vessels will not at once contract again under the same stimulus as before affected them. The needle may be now drawn across them much oftener and more forcibly, but no contraction ensues, or only a trivial one, which is quickly succeeded by dilatation. Yet with a stronger stimulus, such as that of great heat, they will again contract and close. And such a contraction excited by a cautery may last more than a day, before the vessels again open and permit the flow of the blood through them. So that in this we have an illustration of the secondary hæmorrhages from vessels which, after their first closure, have not been sealed by the coagulating blood, or the exudation of lymph,—as well as an illustration of the effect of the cautery or of hot water in again checking such hæmorrhages, and more permanently closing up the vessels.*

Moreover, we may observe in this experiment the adapted movement of the blood. As the vessels are contracting the blood flows in them more slowly, or begins to oscillate; nay, sometimes, even before the vessels begin visibly to contract, one may observe that the blood moves more slowly in them, as if this were the first effect of the stimulus: nor am I sure that I have ever seen (what is commonly described) the acceleration of the flow of blood in the contracting vessels. Such an acceleration, however, is manifest, as the vessels re-open; and as they dilate, so, apparently in the same proportion, does the flow of blood through them become more free, till at length it is quite manifest that they are traversed by both fuller and more rapid streams than passed through them before the stimulus was applied. How long this state may last depends on many circumstances hard to estimate: but at length it ceases, and the vessels, and the circulation through them, assume again their average or normal state.

Such are the effects of the simplest stimulus of blood-vessels. Corresponding ob-

servations have been made on those of frogs, especially by E. H. Weber;† but he used the electro-magnetic stimulus: and from the relation of his experiments we may, I think, conclude that the vessels of the warm-blooded animals may be affected by much less severity of stimulus than those of cold-blooded ones. Moreover, the contraction of the veins in his experiments was very slight, and sometimes not discernible; so it always appears to be in frogs; but in bats it is quite as well marked as that of the arteries.

The effects of the application of other stimuli to the wings of bats correspond in kind with those I have just described, but differ in degree and extent. If a drop of acetic acid, or of tincture of capsicum, of turpentine, or of ethereal solution of cantharides, be placed on a portion of the wing, or washed over it, one sees a quickly ensuing dilatation of the bloodvessels, and a rapid flow of blood through them all. I am not sure that the dilatation is preceded by contraction. Certainly the contraction is very slight, if it occurs at all; but the dilatation is usually much more extensive. When the stimulus has been applied to only one small spot upon the wing, the whole of the bloodvessels in the corresponding metacarpal space, and even those of the adjacent spaces, may enlarge. One might imagine that the dilatation of vessels was due to an increased action of the heart, if it were not that (as I think) it is always greater at the very point to which the stimulus was applied than in any other part of the same wing, and is never at all imitated in the corresponding parts of the opposite wing.

As I have already said, the streams of blood are more rapid in the dilated vessels than in the others, and than in those of the opposite wing. They are also more steady; for in what appears to be the natural state of the circulation in the bat's wing, it is not unfrequent to see an occasional oscillation in the venous stream, an occasional stoppage, or back-current, and then a more forcible rush forward; but these are rarely seen when the stimulus has produced the effect that I have described.

The state which is thus induced by stimuli is what is commonly understood by the expressions "active congestion," or "determination of blood," in a part. It consists, briefly, in general enlargement of the bloodvessels of the part, with an increased velocity of the blood in them. It is, probably, just such a state as this that is felt by sucking women in what they term the "flow of milk," which is no doubt an increased flow of blood into the mammary gland just before

* For the control of hæmorrhages something more than the contraction of the vessels is required, that their orifices may be sealed before they can again dilate; and it is probably to the absence of this something, more than to any condition of the vessels, that we must look for the explanation of secondary hæmorrhages from small vessels.

† Müller's Archiv, 1847.

a quicker secretion of the milk. Less normally, it is such a state as this that we observe in the skin after the application of mustard, or sharp friction, or a heat from 20° to 50° above its own, or in the conjunctiva when stimulated by dust that is soon dislodged; and such we may believe to be the condition of many internal organs when we might doubt whether they are inflamed, or are only very actively discharging their natural functions. Herein, indeed, in what I have described, is one of the pieces of neutral ground between health and disease: a step in one direction may effect the return to health, in another the transit to what all might admit to be the disease of inflammation.

Now this transit appears to be made when the circulation, which was rapid, begins to grow slower, without any diminution, but it may be with an increase, of the size of the vessels. This change one may see in the bat's wing. After the application of such stimuli as I have already mentioned, the movement of the blood may become gradually slower, till, in some vessels, it is completely stagnant. But a corresponding state is better seen after such an injury as that of a fine red-hot needle driven into the membrane of the wing, or through it.

The first effect of such an injury (in addition to the charring and searing of the membrane, the obliteration of its blood-vessels, and the puckering of the portion of it adjacent to the burn) is to produce contraction of the immediately adjacent arteries and veins. They may remain closed, or, as I have already described, after being long closed, may again open, and become wider than they were before. This dilatation follows more certainly, and perhaps without any previous contraction, in the arteries and veins at a little distance from the burn. In these there speedily ensues such a state of "determination of blood" as I have already described: in arteries and veins alike the stream is full and rapid; and the greater accumulation, as well as the closer crowding of the red corpuscles, makes the vessels appear very deep coloured. The contrast of two diagrams, showing the natural and the stimulated conditions, illustrates this difference sufficiently well. The vessels of the one, nearly twice as large as those of the other, darker, and more turgid with blood; and, in the one, numerous capillaries which are not visible in the other. But diagrams cannot show the changes in the mode of movement. Close by the burn, the blood which has been flowing rapidly begins to move more slowly, or with an uncertain stream,—stopping, or sometimes ebbing, and then again flowing on, but, on the

whole, becoming gradually slower. Thus it may, at length, become completely stagnant; and then, in the vessels in which it is at rest, it seems to diffuse and change its colour, so that its crowded corpuscles give the vessels a brilliant carmine appearance, by which, just as well as by the stillness of the blood, they may always be distinguished. As one surveys an area surrounding this part in which the blood is stagnant, or moves slowly, one sees the streams increasing gradually in rapidity. And often, when there is stagnation in a considerable artery, one may see the blood above or behind it pulsating with every action of the heart, driven up to the seat of stagnation, and thence carried off by the collateral branches; while in the corresponding vein it may oscillate less regularly, delaying till an accumulated force propels it forward, and, as it were, flushes the channel.

Again, in the same area as that in which the movement is pulsatile or oscillating, and in the area beyond it, one sees the full and rapid and more numerous streams of "active congestion;" and these may extend over a space altogether uncertain.

Such is the general condition of the circulation round a part thus inflamed; but the varieties in lesser points that may be presented cannot be described. These must be seen; and, indeed, the whole sight should be viewed by every one who would have in his mind's eye a distinct image of what in practice he must often too obscurely contemplate.

The phenomena that I have described as seen in the bat's wing correspond very closely with those observed in the frog's web. Only, I think, the stagnation of blood is neither so constant nor so extensive in the bat: it is seen in portions of single vessels, rather than in districts of vessels,—usually in corresponding portions of arteries and veins, as they lie side by side. The stagnation usually extends into such branches as may be given off from the vessels that are its principal seats; and three or four such seats of stagnation may appear placed irregularly about the burn, or other focus of the inflammation; but I have never seen a general stagnation of blood in all the vessels of even a severely stimulated part. My impression is that in strong and active warm-blooded animals stagnation of blood would be found in only the most severely inflamed parts: in others, I think, retardation alone would exist.

To sum up now what concerns the supply of blood in an inflamed part. We seem to have sufficient evidence that, in general, in the focus of the inflammation, blood is present in very large quantity, distending all the vessels, gorging them especially

with red corpuscles, but often moving through them slowly, or even being in some of them quite stagnant; that all around this focus, the vessels are as full, or nearly as full, as they are in it, but the blood moves in them with a quicker stream, or may pulsate in the arteries, and oscillate in the veins; that, yet further from the focus, the blood moves rapidly through full but less turgid vessels; and that this rapidity and fulness are not to be ascribed merely to the blood, which should have gone through the inflamed part, being driven through collateral channels, but is such a state as is commonly understood as an "active congestion," or "determination of blood," in the part.

I have already said that we may believe that what is seen in the bat represents fairly the state of inflamed parts in all warm-blooded animals. I am quite conscious that the most one can see with the microscope is but a faint picture of such inflammations as we have to consider in practice; that it is very trivial in both its appearance and its results. Still, it is a picture of a disease of the same kind; and a miniature, even faintly drawn, may be a true likeness. Besides, all that can be observed of the complete process of inflammation in man is consistent with what we can see in these lower and lesser creatures. The bright redness of an inflamed part testifies to the fulness of its bloodvessels, and the crowding of the red corpuscles; the occasional duskiness or lividity of the focus is characteristic of stagnation; the throbbing in the part, and about it, and the full hard pulse in the ministrant arteries, are sure signs of obstruction to the passage of blood; the gush of blood on cutting into the tissues near an inflamed part, or in bleeding from one of their veins, tells of the determination of blood in these, and of the tension in which all the containing bloodvessels are held.

It is particularly to be observed that the stagnant or retarded blood is not apt to coagulate. I have found it fluid after at least three days' complete stagnation, and so I believe it would remain till it is cleared away, unless the part sloughs. In the latter case it would coagulate, as it does in carbuncles and the like, which hardly bleed when we cut them through; but, so long as the blood is fluid, though stagnant, it may be driven from the vessels with full force as soon as an easy exit for it is made by cutting into the inflamed part, or opening one of its large veins. I need here only refer to Mr. Lawrence's well-known and instructive experiment. In a patient with an inflamed hand he made similar openings into veins in both arms. From the vein on the diseased side, three times more

blood flowed than from the vein in the healthy arm, in the same time; and this increased flow represented at once the greater determination of blood about the focus of the inflammation, and the greater tension in which were held the walls of the blood vessels, and, indeed, all the integuments of the inflamed and swollen part.

Now, to what can we ascribe these changes in the movement of the blood? In all the pathology of inflammation no problem seems more difficult than this principal one.

It has been commonly said that, as the vessels contract, therefore the movement of blood becomes more rapid in them, as when a river entering a narrow course moves through it with a faster stream; and that then, as the vessels widen, so the stream becomes, in the same proportion, slower. But this is far from true. The stream often becomes slower as the artery or vein becomes narrower by contraction; and then, as the tube again dilates, the stream grows faster; and then, without any appreciable change of size, it may become slower again, till complete stagnation ensues in at least some part of the bloodvessel. I think I can be quite sure that the velocity of the stream in any vessel of an inflamed part is not determined by the diminution or enlargement of the channel. Without change of size, the stream may be seen decreasing from extreme velocity to complete stagnation.

On what the alteration of movement of the blood in such a case depends I cannot tell; but we have facts enough to justify such an hypothesis as that there may be some mutual relation between the blood and its vessels, or the parts around them, which, being natural, permits the most easy transit of the blood, but, being disturbed, increases the hindrances to its passage. Such hindrances appear to be produced by the addition of salts of baryta, or of potash, to the blood: the presence of an excess of urea in the blood probably produces the like effect: and such facts as these make the hypothesis I have referred to not unreasonable. At any rate, the belief that the more or less rapidity of movement of blood through small vessels may depend on other than evident mechanical relations, cannot appear absurd to any one who has seen the movements of fluid in the *Chara*, or *Vallisneria*, or any such plants, in which a circulation is maintained without any visible source of mechanical power.

II. I mentioned, as the second condition necessary to the healthy nutrition of a part, a right state and composition of the blood.

In a former course of lectures* I pointed out that, by this state, we must understand not merely such purity of the blood that chemistry cannot detect a wrong constituent in it, or a wrong quantity of any of the normal ones, but that natural constitution of the blood by which it is exactly adapted to every tissue that it has to nourish,—with an adaptation so exact that chemistry cannot approach to the determination of whether it is maintained or lost.

That this adaptation is disturbed in many cases of inflammation is proved by the instances in which inflammations plainly have their origin in morbid conditions of the blood. But I fear that the nature of this disturbance cannot yet be chemically expressed, and that the facts which chemistry has discerned in the condition of the blood in inflammations cannot yet be safely applied in explanation of the local process. For, first, we observe the phenomena of inflammation where we cannot suppose the whole blood disordered,—as after the application of a minute local stimulus, such as a foreign body on the conjunctiva; and, secondly, among the changes observed in inflammatory blood, the principal one—namely, the supposed increase of fibrine—is ambiguous: it may be at once an increase of fibrine and of the white corpuscles of the blood. These two constituents of the blood, the fibrine and the white or rudimental corpuscles, cannot be well separated by any process yet invented; and in all the estimates of fibrine, whether in health or in disease, the weight of the white corpuscles is included. Now, in many inflammations, these corpuscles are increased, and we have no means of clearly ascertaining how much of an apparent increase of fibrine is really such, and how much is due to the corpuscles entangled in the fibrine. Till this can be settled, I think we may not deduce any of the local phenomena of inflammation from the increase of fibrine in the blood; neither, more assuredly, can we trace, as some do, the fever and other general signs of inflammation to the abstraction of fibrine and albumen by the exudation from the blood.†

The other changes of the blood in inflammation—the diminution of its red corpuscles and increase of water—are even

less adapted to explain any of the phenomena of the local process. Whatever may be their strength or value as facts, they are as yet isolated facts, such as one cannot weave into the pathology of the disease.

I fear, too, that the structural conditions of the blood will not, more than the chemical, help us to explain the phenomena of inflammation. Some of our most worthily distinguished physiologists have ascribed much to the existence of large numbers of the white blood-corpuscles, and their accumulation in the vessels of the inflamed part: indeed, they have taken this for the foundation of nearly their whole doctrine of inflammation, ascribing to it both the stagnation of the blood and the changes it is presumed to undergo,—such as the increase of the fibrine, and many others. But the facts on which they have rested are unsound: their observations have been made on frogs, and do not admit of application to our own case, or, perhaps, to that of any warm-blooded animal. In many frogs, especially in those that are young, or sickly, or ill-fed, the white corpuscles are abundant in the blood: they are rudimental blood-cells, such as may have been formed in the lymph or chyle; and in these cases they are either increasing quickly in adaptation to quick growth, or else increasing because, through disease or defective nutriment, although their production is not hindered, yet their development into the perfect red blood-cells cannot take place. In either case, their peculiar adhesiveness making them apt to stick to the walls of the blood-vessels, they may accumulate in a part in which the vessels are injured or the circulation is slow, and thus they may sometimes augment the hindrances to the free movement of the blood. But I believe nothing of the kind happens in older or more healthy frogs, or in any ordinary inflammation in the warm-blooded animals. I have drawn blood from the vessels in the inflamed bat's wing, in which it was quite stagnant, and have found not more than one white corpuscle to 5000 red ones. I have often examined the human blood in the vessels of inflamed parts after death, and have found no more white corpuscles in them than in those of other parts. In blood drawn from inflamed parts during life, I have found only the same proportion of white corpuscles in them as in the healthy parts of the same person. I therefore cannot but accord with the opinion often expressed by Mr. Wharton Jones and Dr. Hughes Bennett, that an especial abundance of white corpuscles, i. e. of rudimental blood-cells, in the vessels of an inflamed part, is neither a constant nor even a frequent occurrence; and I believe that, when such corpuscles are nu-

* On Nutrition, &c., published in the MEDICAL GAZETTE for 1847.

† The whole of this part of the current pathology of inflammation seems to have been too hastily constructed. The local changes observed in the frog have been used to explain the chemical changes of the blood in man, although no such changes have been proved in the blood of the frog; and the changes in the blood of man have been used to explain in him the existence of local phenomena which are assumed, but have never been proved, to be similar to those observed in the frog.

merous in an inflamed part, it is only when they are abundant in the whole mass of the blood. Now, as already stated, they are thus abundant in some cases of inflammation, especially, I think, in those occurring in people that are in weak health, and in the tuberculous; but, even in these cases, I have never seen an instance in which they were present in nearly sufficient quantity to add materially to the obstruction of the blood in the inflamed part, nor one in which any influence of theirs could be suspected to alter peculiarly the constitution of the blood therein.

Mr. Wharton Jones was the first to describe accurately a remarkable condition presented by the red blood-cells in inflammations. As soon as ever a drop of inflammatory blood is spread out thinly, the corpuscles seem to run together and adhere in long rows or clusters, and these holding together give the clot thus formed on a slip of glass the peculiar mottled pink and white appearance which Mr. Hunter observed as one of the characters of inflammatory blood. The same condition is observed in the blood of pregnant women, and appears natural in that of horses; and in all these cases it may be regarded as the chief cause of the formation of the buffy coat, inasmuch as the clustered blood-cells, sinking rapidly, will generally subside to some distance below the surface of the liquid part of the blood, before the coagulation of the fibrine is begun.

Some have supposed that a similar adhesion of the blood-cells may occur in the vessels of an inflamed part. I have seen nothing of the kind in either the inflamed bat's wing or in the vessels of inflamed organs examined after death. When the blood is not stagnant, the corpuscles are indeed closely crowded, but they are not clustered, nor do they appear adherent: neither does such clustering appear even in stagnant blood; the change here appears to be a diffusion of the colouring matter, so that the outlines of individual blood-cells cannot be seen, and all the contents of the vessel present an uniform bright carmine tint.

But although we can see so little of the changes that may ensue in blood thus stagnant or much retarded, yet we may be nearly sure that the blood in an inflamed part does undergo important changes, when we remember what general effects, what constitutional disturbance, may ensue in the train of an inflammation of purely local origin. Changes probably ensue in the blood similar to some of those that we shall have to trace in the lymph effused from it into the parts around the vessels; possibly particles of fibrine may coagulate

in it, and corpuscles of lymph or pus may be formed and degenerate within it; and these, when the stagnation is not constant, or is incomplete, or is passed away, may be carried into the general circulation, infecting the whole blood, exciting general disturbance, as in traumatic fever, or producing various and wide-extended suppurations, as in the purulent diathesis following local injury. All these, and many other concomitants of inflammation, may be reasonably ascribed, at least in part, to the changes that the blood undergoes in the inflamed tissue; but I must repeat that nothing that either the microscope or chemistry has yet discerned will suffice to explain these changes: they belong rather to the theory than to the facts of inflammation.

III. The third enumerated condition for the healthy nutrition of a part is a certain influence of the nervous force. The change that this undergoes in the inflammatory mode of nutrition is, therefore, next to be considered.

That in the higher vertebrata some nervous force is habitually exercised in the nutrition of all the parts in or near which nerves are distributed; and that it is exercised, not merely in affecting or governing the size of the blood-vessels of the part, but, with a more direct agency, as being one of the forces that concur in the performance of the plastic act;—these things may, I believe, be amply proved; and I shall again have occasion to refer to them. But as we have no exact knowledge of the nervous force, or of the manner in which it operates in natural formation, so neither can we tell how its operation is affected while it shares in the production or maintenance of inflammation.

The expression that the nerves of an inflamed part are in an "excited" state, is suggested by the existence of pain,—by a slight stimulus being acutely felt,—by the natural heat, or a slight increase of the heat, being felt as a burning,—and by the part being, even independent of any known stimulus, the seat or source of subjective pains and heat. But the very frequent cases in which pain exists, and abides long, without any other sign of inflammation, and the cases in which the pain bears no kind of proportion to those other signs, or to the effects, of inflammation,—these may suggest that, besides this "excited" state of the nervous force which is felt as pain in the inflamed part, there may be some other state by which the nervous force is more intimately connected with the inflammatory process,—a state of disturbance, which may, indeed, be felt as pain, but

which more properly affects the influence of the nervous force in the process of nutrition.

We obtain some evidence of the existence of such a state when we observe that, without relation to pain, it is communicable from the nerves of inflamed parts to those of other parts; in which parts, then, a kind of sympathetic inflammation may be generated. This transference or communication of the disturbance of nervous force is, indeed, evident enough in relation to that state which is felt as pain; for pain is not limited to the inflamed part, but is diffused around it, and is in sympathy often felt where no other sign of inflammation exists. But besides, and sometimes, I repeat, independent of this condition which is felt as pain, the inflammatory condition of the nervous force may be similarly communicated or transferred. The simplest may be the most proving instances. Whoever has worked much with microscopes may have been conscious of some amount of inflammation of the conjunctiva in consequence of over-work. Now the stimulus exciting this inflammation has been directly applied to the retina alone; and I have often had a slightly inflamed left conjunctiva, after long working with the right eye, while the left eye has been all the time closed. I know not how such an inflammation of the conjunctiva can be explained, except on the supposition that the excited state of the optic nerve is transferred or communicated to the filaments of the nerves of the conjunctiva, generating in them such a state as interferes with its nutrition. It is true that in these simpler cases the retina is not itself evidently inflamed; but after yet severer stimulus it commonly is so, and in these the conjunctiva shares in the evil effects of the communicated stimulus,—effects which we cannot ascribe to any alteration in the blood, or the size of the blood-vessels.

I may mention another case: the occurrence of inflammation of the testicle in cases of severe irritation of the urethra. The most unexceptionable cases of the kind are those in which the irritation is produced by a calculus impacted in a healthy urethra. I have here a specimen* in which extensive deposits of lymph and pus are seen in the testicle of a man in whose urethra a portion of calculus was impacted after lithotripsy. Here is such an inflammation as we cannot refer to disease of the blood, and attended by such changes as we cannot explain by any enlargement or paralysis of the blood-vessels:

nor do I know how it can be at all explained except by the disturbance of the exercise of the nervous force in the testicle, which disturbance is excited by transference from the morbidly affected nerves of the primary seat of irritation.

In like manner, I believe that the extension or transference of inflammation after pain may be ascribed, at least in part, to the coincident transference of the disturbed plasturgic force of the nervous system. In paroxysms of neuralgia, we see sometimes a transient inflammatory redness or oedema of the part; so, when a more abiding pain has been excited, by sympathy with some inflamed part, there may presently supervene the more palpable effects of inflammation.

I feel that, in discussing such a point as this, one passes from the ground of demonstrable facts; but there is less fault in this than in the belief that the very little we can see of a morbid process can guide us to its whole pathology. When we look at an inflamed part, we should not think that, if we could see its blood-vessels and test its blood, we should detect all that is in error there: rather we should think that all the forces are at fault which should be concurring to the due maintenance of that part; and while we are ignorant of the nature of some of these forces, it is better that their places in our minds should be occupied by reasonable hypotheses, than that they should be left blank, or be over-spread with the tinge of one exaggerated theory, such as that which ascribes all inflammation to a change in the state of the small blood-vessels.

IV. The last condition necessary to healthy nutrition in a part is the natural or healthy state of the part itself.

How, in the inflammation of a part, its proper elements are altered, we cannot say, for in the early stages of the process we can rarely see a change in them; nearly the whole of the visible error is in the blood-vessels and their contents, and in the interspaces between the proper elements of the part. Hence it is not surprising that many good pathologists have held such opinions as that the blood-vessels are the mainsprings of the process of inflammation, and that it essentially consists in an altered relation or reciprocal action between the vessels and the blood.

Yet it seems more reasonable to think that the morbid process may be determined by the state of the proper elements of the part—of its cells or filaments, or, more probably, of the material in it which is in progress of development. For, for example, some of the phenomena of inflammation

* From the Museum of St. Bartholomew's Hospital, Ser. 23, No. 55.

may ensue, through injury or disease, in parts that have neither nerves nor blood-vessels. We have instances of this in the deposits of lymph, or the other consequences of severe injuries, in the cornea and vitreous humour,—parts which, if ever they are vascular, become so only after the effusion of lymph in them. Such, too, are seen in the ulcerations of articular cartilage, in which the vascular phenomena of inflammation are confined to the adjacent tissues. We cannot in these cases ascribe the inflammation to an alteration of the relation between the blood and blood-vessels, for blood-vessels do not exist in the part in which the inflammation has its seat.

Further evidence that some morbid state of the proper elements of a part, or their altered relation to the blood, may determine both the advent and some of the results of inflammation, is afforded by analogy. In the natural state, it is almost always noticeable that the condition of each part determines the amount of blood to be supplied to it, and in some measure, also, the rate of movement and the mode of disposal of the blood. Thus, in the embryo, each part is formed in rudiment before it receives any blood, and the increasing supply of blood never precedes, but follows, and is adjusted to, the increasing development and growth. In later life there are, indeed, some cases in which an accidentally increased supply of blood is followed by an increased growth of parts, as in some hypertrophies and morbid growths, or as in parts transplanted from less to more vascular structures; but the more usual and normal course is that the increasing supply of blood follows, as a consequence, the increasing growth.

We might, therefore, well expect that an alteration in the state of a part itself,—i. e., not of its blood-vessels or its nerves, but of its proper elements, or, more especially, of those which are in progress of development,—would be a constant concomitant of the other changes that make up the inflammatory state. The nature of this alteration in the first instance we cannot discern: its later characters are all indicative of defective nutrition; but of these, such as softening and disintegration, aptness for absorption, ulceration, and the rest, I hope to speak in a future lecture.

Here I will only add one sentence to avoid misunderstanding. I have spoken so separately of the changes in the several conditions of nutrition, that I may have seemed to imply that inflammation may consist in the disturbance sometimes of one, sometimes of another, of these states. It is true that inflammation may have its beginning in any one of these conditions,—

as in an alteration of the blood in rheumatism, in an alteration of the nervous force in irritation of the retina, in an alteration of the proper elements of the tissue in inflammation of the cornea; but probably it is never fully established without involving in error all the conditions of nutrition; and, respecting both the manner in which they may be thus all involved, and their subsequent changes, they should be studied as concurrent events, rather than as a series of events of which each stands in the relation of a consequence to one or more of those that preceded it. Nowhere more than here is the mischief evident, of trying to discern in the economy of organic beings a single chain or series of events, among which each may appear as the consequence of its immediate predecessor: most fallacious is the supposition that, starting from a turbulence and stagnation of blood in the vessels of a part, we may explain the pain, the swelling, the heat, and all the other early and consecutive phenomena of inflammation. The only secure mode of apprehending the truth in this, as in every other part of the economy of living beings, is by studying what we can observe as concurrent yet often independent phenomena, or as events that follow in a constant, but not necessarily a consequent, order.

FRACTURE OF BOTH THIGHS.

AN excellent cure was obtained by means of Physick's modification of Desault's apparatus. The experience of the Hôpital continues to favour the use of this dressing for fracture of the thigh. The greatest care, however, will sometimes fail in preventing excoriation of the perineum or ankle; and time may, perhaps, yet bring improvements. The points still unattained in the ordinary treatment of this fracture are—1st, the use of the *tuberosity of the ischium* as the basis of counter-extension, as the least liable to excoriation; and 2d, the *distribution* of the extending force over a surface sufficient to prevent undue pressure or friction. The latter indication has been several times successfully met by the application of broad adhesive straps spirally from the knee around the leg, tied together, and to the foot-board below the foot. Possibly, a modification of the fracture-bed may be constructed, making the bed itself the apparatus, and thus allowing counter-extending bands to be attached to *both* perineæ, so as to require less stress on and one point.—*Dr. Hartshorne, in American Journal of Med. Sciences, Jan. 1850.*

Original Communications.

THE PSYCHOLOGY OF NERVOUS,
SPASMODIC, AND CONVULSIVE
DISEASES.

BY WILLIAM SMITH,

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coln.

Licuit, semperque licet
Parcere personis, dicere de vitiis. HORACE.

At the close of my last communication, I proposed relating some cases proving the evil effects resulting from the practice of depletion, general or local, in the class of disorders now under consideration. Prior to doing so, however, I take leave to quote one more extract from the little work of Sir Benjamin Brodie. Every thing that has issued from the pen of that accomplished surgeon bears the stamp of an original and strictly practical mind: he indulges in no idle theories, but strikes straight at his object with true Spartan brevity. At pages 79 and 80, he remarks:—"Blisters, issues, and the whole class of counter-irritants, in the majority of cases increase the patient's sufferings; and there is one objection that may be urged against all local remedies, which applies especially to these—namely, that they prevent the attention being abstracted from the local symptoms. I may take this opportunity of observing, that nothing is more essential to the patient's recovery, than that her mind should not be constantly occupied with the subject of her ailments. The treatment employed should be such as will involve as little as possible deviation from the ordinary habits of life. Thus, in a case of hysterical neuralgia of the knee or hip, it seldom happens that any real amendment takes place while the patient remains confined as an invalid to her sofa. The pain may abate, but a sense of weakness follows, which disables her from walking more than the pain itself, and which, for obvious reasons, goes on increasing in proportion as the confinement is of longer duration. The first step towards a cure is, that she should have sufficient strength of mind

to begin to use the limb in spite of present suffering."

Now here, according to my experience, lies the grand secret of treating all these nervous disorders; this is the true philosopher's stone—the keystone of all our moral and remedial agencies—diverting the mind, by any means, from the morbid contemplation of its own perverted or depraved sensations. If, as Dr. Marshall Hall remarks (quoted by Dr. Calvert Holland, in his last work, "Practical Views of Nervous Diseases")—"The principle of action in the cerebral system is the *vis*, or the immortal soul, upon the cerebrum the soul sits enthroned, receiving the ambassadors, as it were, from without, along the sentient nerves; deliberating and willing; and sending forth its emissaries and plenipotentiaries, which convey its sovereign mandates, along the voluntary nerves, to muscles subdued to volition." If, I say, these views are correct, it is impossible but that all these disorders, more especially affecting the female sex (but not absolutely or exclusively confined to them), must have a psychical as well as a somatic or material relation. The physical treatment of these cases has been ably handled, but I am convinced that the psychical department is still open to further investigation. If we look at the class of persons more particularly prone to these maladies, we shall find them possessed, very frequently, of high intellectual powers, united to a delicate or perhaps strumous habit of body; the mind is, as it were, too capacious or active for its earthly tenement; but the grand evil—the *fons et origo mali*—is, they have no fixed object or pursuit, no way of getting rid of their time—they are plagued to death with ennui and tedium vitæ; they do not, most unfortunately, employ the muscular system to any extent; and hence the nervous influence—be it *vis nervosa*—animating principle, or animal spirits (of the older writers)—accumulates in the system, until nature, ever fertile of expedients, finds a vent in the shape of spasmodic and convulsive actions. The fault may lie partly (as Hippocrates affirmed) in the blood, or in the nervous system, or the assimilative or reproductive apparatus, or common to all, but yet what really cures these disorders? Fresh air, combined with exercise, cheerful society (by drawing the mind from the contemplation of its mor-

bid and acutely sensitive impressions to the healthy realities of surrounding objects, regular hours; and last, though not least, plain nutritious diet. Our fashionable watering places, Brighton, Scarborough, &c., obtain a celebrity for many cures of these disorders — and why? because people leave their domestic troubles or their petty vexations behind them. Agreeable and animating objects are presented to the view, engaging the attention, and abstracting the mind from internal reverie to external impressions. Many ladies will be induced to exercise themselves on the marine parade of a fashionable and crowded watering-place, or attend the pump-room at stated hours, in accordance with the *mode*, whom no persuasions or remonstrances of their ordinary medical adviser could remove from the threshold of their family residence. In London, too, when invalids go up from the country, the numerous attractions of the shops, and the diversity and variety of objects presented to the eye, withdraw the mind from its disagreeable associations, and overpower any sensations of bodily fatigue or discomfort: hence, persons who in the country seldom think of using their own feet for progression (making use of their own carriage, or the nearest railway train), whilst gazing on the sights and novelties of London, will, unconsciously as it were, walk six or eight miles a day, without any perceptible fatigue, and find the system invigorated by it. Again, the high professors of hydropathy, homœopathy, and many other learned and equally rational systems, lay down laws and ordinances which, like those of the Medes and Persians, admit of no infringement (since such is the ardour and faith of their devoted converts that they are rarely broken); but with the legitimate practitioner all instructions or suggestions as to diet, regimen, air, exercise, hours, &c., may be disregarded with impunity, the patient soothing herself with the “flattering unction,” that she has swallowed the physic strictly according to the letter of the law.

In order to support my argument relative to the psychical character of nervous or hysterical affections, I shall take leave to quote some extracts from the sagacious Sydenham (Dr. Swan’s translation):—“But their unhappiness does not only proceed from a great indisposition of body, for the

mind is still more disordered, it being the nature of this disease to be attended with an incurable despair, so that they cannot bear with patience to be told that there is any hope of their recovery, easily imagining that they are liable to all the miseries that can befall mankind, and presaging the worst evils to themselves. Upon the least occasion, also, they indulge terror, anger, jealousy, distrust, and other hateful passions; and abhor joy, and hope, and cheerfulness, which, if they accidentally arise, as they seldom do, quickly fly away, and yet disturb the mind as much as the depressing powers do: so that they observe no mean in any thing, and are constant only to inconstancy. They love the same persons extravagantly at one time, and soon after hate them without a cause; this instant they propose doing one thing, and the next change their mind and enter upon something contrary to it, but without finishing it; so unsettled is their mind that they are never at rest. What the Roman orators assert of the superstitious, agrees exactly with these melancholic persons. Sleep seems to be a relief from labour and inquietude, but from this many cares and fears arise, their dreams being ever accompanied with the representations of funerals and apparitions of their departed friends. And so much are they distempered in body and mind, that it seems as if this life were a purgatory to expiate offences committed in a pre-existent state. Nor is this the case only in furious maniacs, but even in those who, excepting these violent passions, are judicious persons, and for profoundness of thought and solidity of speech greatly excel those whose minds were never disturbed by these tormenting thoughts. So that the observation of Aristotle is just, who asserts that melancholy persons are the most ingenious.

“But this very dreadful state of mind which I have mentioned above only attacks such as have been much and long afflicted with this disease, and are at length overcome thereby; especially if misfortunes, grief, hard study, and the like, along with an ill habit of body, have contributed thereto.

“The procaccartic or external causes thereof are either violent emotions of the body, or more frequently some great commotion of mind, occasioned by some sudden fit, either of anger, grief, terror,

or the like passions. Upon this account, whenever I am consulted by women concerning any particular disorder which cannot be accounted for on the common principles of investigating diseases, I always inquire whether they are not chiefly attacked with it after fretting, or any disturbance of mind; and if they acknowledge this, I am well assured that the disease is to be ascribed to the tribe of disorders under consideration, especially if the diagnosis appears more evident by a copious evacuation of pale urine at certain times. But to these disturbances of mind which are the usual causes of this disease, must be added, emptiness of the stomach, from long fasting, or immoderate evacuations, whether by bleeding too profusely, or giving too strong a vomit or purge."

Now I think it is quite evident that Sydenham—a most acute observer of the phenomena of disease—is here describing an ultra case; but, nevertheless, I have been consulted in several where very similar symptoms were present. One thing, however, is quite clear, that such cases as these, or even the milder forms of the malady, are not likely to be benefited by depletion, counter-irritants, and confinement to the horizontal position. Now, let us see how far actual practice, in too many instances (as every practitioner's personal experience will abundantly demonstrate), tallies with this assumption? Very soon after my appointment to the General Hospital at Lincoln, a lady in that place, at whose house I occasionally visited, asked my opinion relative to the case of a female servant, a very interesting looking, but delicate girl, of about twenty-five years of age, whom she highly valued for her intelligence and attachment to her daughters. I have only some straggling notes of the case by me, but they, with the assistance of a retentive memory, will be amply sufficient for a brief history of the disorder. She complained of violent pain in the spine, about the dorsal region. Countenance pallid, but not sallow. Catamenia irregular (in nine-tenths of these cases they are so). Bowels costive. At my recommendation her mistress got her made an in-patient of the hospital. On being seen by the surgeon of the month (for at Lincoln, in my time at least, there were four surgeons to about sixty patients,

including physicians' cases—an absurdity worthy the dark ages!) she was ordered twelve leeches to the spine; Calomel and Jalap powder at bed-time; Decoct. Aloes Comp. ʒj. ter die; and to keep the recumbent posture. The leeches were repeated once or twice (I will not positively say which, for "nothing extenuate, nor set down aught in malice," shall be my motto), and a large blister was applied to the spine. The dorsal spinal pains were not relieved, but she got weaker. The surgeon who came next in rotation, not having quite so much of the surgical Martinet in his composition, treated her more mildly, and thus she remained in *statu quo* at the end of this month. On my suggestion as to the real nature of her malady, his successor consented to her being transferred to the physician's ward. She there came under the senior physician, who, like Sir B. Brodie, was somewhat up (I employ Dr. Watson's very apt expression) to these cases: the doctor fell in with my views of the case, ordered her Mist. Ferri Comp. and other tonics, plain nutritious diet, and, certainly not the least effectual remedy, ordered her out of bed. A fortified town does not always yield at the first summons, neither does this medical Proteus readily discover all his masked batteries at once—she had retention of urine! Now, during my pupillage at Guy's Hospital, I had listened with reverential awe (as students ought) to the pithy remarks of Dr. Addison relative to females' disorders, one of whose maxims it was—never to pass a catheter if you can help it, for obvious reasons: however, the retention continuing, the physician, fearful of injury to the bladder, ordered the urine to be drawn off; but, as if the Fates had ordered it to reveal the nature of the case, I had occasion to be absent from the hospital for two days after this order, when, rather than submit to the operation by a pupil of one of the surgeons, my *locum tenens*, she contrived by some means to evacuate the contents of the bladder. This fact afforded me a cue; the catheter was never afterwards employed. She was directed to take exercise in the garden, to assist in the domestic offices, kitchen, &c., and speedily spoke of herself as feeling greatly improved. She was discharged recovered within a fortnight from the time she first began to employ herself.

Now this case, which I am aware is not by any means an uncommon one, for I have myself met with very many, (especially in private practice), has been related at length for the purpose of illustrating my views relative to the psychical manifestations in this class of disorders. If my observation goes for anything, the intellectual faculties are preternaturally acute, and associated (in the majority of instances) with the strumous diathesis of body: if it occur in females of the lower orders, which it occasionally does, they have a mind above their station, and so had the girl just alluded to. She never did any drudgery, hard work, or, in fact, as Sir B. Brodie acutely remarks, she was not one of those "who, fulfilling the edict of the Deity, 'eat their bread in the sweat of their face.'" Now, taking this assumption to be correct, have we no clue to the origin and cause of one half of the spinal affections which decimate, as it were, the fairer and more lovely portion of the middle and higher classes of society? Let us look into this matter, and trace such a case *ab ovo*: for this I hold to be the most rational plan. A lady has a daughter, say from the age of 11 to 15, who feels pain in the back often after the slightest exertion; there is, however, not much the matter, but still the maternal instincts are dissatisfied with the aspect of affairs: the medical adviser is summoned, who examines the spine. Now if the young lady has (and how seldom does the converse obtain!) any spice of the *passio hysterica* in her composition, she will flinch at some particular spot, most probably about the dorsal or sacral region; sagacious head-shakings are exchanged between mamma and medical adviser, and it is no exaggeration of facts to assert that in very many instances that fair and gentle girl's ruin, as regards health and comeliness of form, may date from that moment. To use the language of Goldsmith, *haud incertius loquor*. A relative of my own, many years ago, having injured her back by a fall, went through a seven or nine years' fiery ordeal (for the moxa was unflinchingly employed) of this kind. Her constitution has never got over it. If I mistake not, you may subtract ten or fifteen years from the term of her natural existence. I shall ever believe, from what I have since gathered of the history of her case (for

it occurred long before I commenced my medical novitiate), that a residence on the sea-coast during several summers did more towards her ultimate recovery, both from the effects of the remedies employed and the disease itself, than any pharmaceutical preparations: moreover, I think that the views of the sagacious and observant Pinel, relative to the value of medicamenta, are quite as applicable to the whole class of neuroses as to mental derangement itself; and it is my intention, during the remainder of my professional career, to put this matter to the test of actual experiment. I know one very experienced and acute physician, whose professional skill and valuable time for more than twenty-five years have been devoted to the service of three medical charities, besides an extensive practice among county families, who entertains very similar opinions to my own: in fact, from our frequent personal contact and free interchange of views at one period of my life, it is highly probable that I became strongly inoculated or saturated with many of his sentiments, and the virus or leaven is still working within me.

Within the last three years I have had under my own care a young lady of twenty-three or twenty-four years of age, who had, prior to my taking charge of the case, run the gauntlet for a considerable period among certain "spinal professors;" and this lady, being of a decidedly intellectual and observant turn of mind, afforded me great insight into the mysteries of inclined planes, prone couches, and elaborate sets of exercises. Without wishing absolutely to decry the whole fraternity for the sins of a few, I must nevertheless take leave candidly to avow, as the result of my own observation and attentive perusal of works treating of the spinal system of tactics, that there is a great deal of chicanery mixed up with a slight portion of judicious management in the treatment of such cases. One thing, however, I cannot omit to notice, as most apposite to my present course of investigation—namely, that if at the commencement, the period of incubation (as Dr. Forbes Winslow aptly expresses it) of these disorders, the hysterical diathesis is largely concerned in the continuance, if not production, of the spinal irritation, are not all local applications whatever mischievous, and

in direct contravention of the doctrine so admirably propounded by Sir B. Brodie? So long as the medical adviser continues to examine the spine at his daily visit, order leeches, blisters, setons, or apply strong escharotics, the moxa, and especially keep the patient in the horizontal posture, what probability is there that the young lady's mind can be diverted from the contemplation of her own morbid and hyperacute sensations? It is extremely probable that in three-fourths of these cases, at the onset, the spinal irritation is merely sympathetic, dependent on some functional derangement of the uterine or ovarian secretions: at this stage of the malady there is no organic disease; a little attention and accurate investigation as to the quantity, quality, and regularity of the catamenial fluid, together with judicious instructions relative to diet, air, exercise, and early hours both of rising and retiring to rest, and a careful avoidance of very warm rooms or heavy clothing either by night or day, the cold shower-bath, sponging the spine with cold salt and water or vinegar and water,—would, I am convinced, prevent the actual occurrence of spinal distortion, and thus rescue many a lovely victim from the tortures of body—moxa, caustics, issues, &c., and the anguish of soul consequent upon the bitter reflections daily and hourly arising in the sensitive mind of woman from the contemplation of her own personal deformity. I speak warmly on the subject: within the last fortnight only I have seen a young lady in the country for an affection of the lungs, whose spine in the cervical region bears the mark of a large eschar from the application of nitrate of silver some eight or nine years ago (she is now 21 or 22), employed, as her mother assured me (not without marks of strong indignation) until an immense slough separated from the spine; in addition to which the poor girl had been kept in bed for three weeks or a month! Now I would ask whether, in a female of strumous habit, as this lady undoubtedly is, such heroic treatment was not calculated, to aggravate the disease, and induce actual phthisis? Possibly the gentlemen who devote themselves exclusively to the study of spinal affections, might, like the superintendents of our large lunatic establishments, assert, in self-defence, that the mischief was done,

and the disease rendered incurable, before they received the patient. Admitting the truth of this in part, do they not, by their unnatural confinement of such patients to the house, and even to their couch,—prone or supine, it matters not which, and consequent deprivation of the salutary effects of pure air and exercise,—tend to exhaust the vital powers? and, if there be any undue mobility or morbid excitement of the nervous system—cerebral, spinal, or ganglionic—give rise to the occurrence of spasmodic or convulsive disorders, facial neuralgia, &c. &c.? Such undoubtedly is the fact, and every experienced practitioner will be able to corroborate the assertion.

Dr. Watson, in his admirable Lectures on the Principles and Practice of Physic, (third edition) remarks on the subject of hysteria:—"The hysterical seizure is almost peculiar to women; and it seldom occurs in them except during that period of their lives in which the menstrual function of the uterus is, or ought to be, in activity. In this country it is most apt to occur between the ages of fifteen and forty; and, in the vast majority of patients who suffer from it, you will find some marked derangement of that particular function. These facts alone afford a strong corroboration of the ancient theory which ascribed the whole of the phenomena to uterine disorder, and named the disease accordingly. You will hear or read of disputes as to whether the womb, with its appendages, or the nervous system, is the seat of hysteria; but such disputes are merely verbal, I conceive. No doubt the convulsive movements, and the mental affection, and the unnatural sensations, depend upon some altered condition of the brain and nerves; but it does not follow that the disease originates in that altered condition. We know that the uterus, or the ovaries, cannot of themselves determine the muscles to contract; but if they be in an unhealthy state, they may act upon the muscles through the medium of the nervous system; and such I take to be the fact. How they do so, we no more know than we know how the little finger is bent when we resolve to bend it.

"But, say some, we every day meet with diseased conditions of the uterus and ovaries,—amenorrhœa, dysmenorrhœa, menorrhagia, even disorganisa-

tion,—without any of these nervous symptoms. True; and we cannot always fathom the mystery of this: but one thing is certain, that there exists in some persons a much greater readiness to take on the disease, upon the application of the exciting cause, than in others. This predisposition I have had occasion to advert to again and again since I began to speak of the spasmodic diseases of the nervous system. Such diseases occur in certain individuals only, and in these individuals there pre-exists a peculiar condition of the nervous system, 'for which (says Dr. Alison) we have no more precise or definite expression than nervous irritability or mobility,—a condition which is more common in women and children than in men, and more common in all persons when in a state of weakness than when in the full enjoyment of muscular strength: in women, particularly, more common about the menstrual periods, and immediately after delivery, than at other times; more common likewise in those in whom the monthly discharge is habitually excessive or altered, as in leucorrhœa, or suddenly suppressed, or more gradually obstructed in the different forms of amenorrhœa, than in others. In this condition of mobility both sensations and emotions are intensely felt, and their agency on the body is stronger and more lasting than usual. Continued voluntary efforts of mind, and steady or sustained exertions of the voluntary muscles, are difficult or impossible. The muscular motions are usually rapid and irregular, and the "animus nec sponte, varius et mutabilis." In persons of this moveable temperament spasmodic complaints are easily excited; and the tendency to their recurrence is increased by each repetition of them. * * *

"And belonging to women of this peculiar constitution there is one other very remarkable character which it behoves us to make ourselves thoroughly acquainted with. Almost any part of the nervous system in these persons is liable, under the influence of slight causes, and even without any obvious cause, to fall into a disordered state of action and suffering, more or less resembling that which inflammation or organic disease might excite in the same part.

"This is a most important fact; be-

cause, if we erroneously ascribe symptoms which really result from inflammation to mere nervous or hysterical disorder, we may suffer the patient to perish for want of active measures that might have saved her; and, on the other hand, if we apply to these nervous imitative, hysterical complaints, the treatment proper for inflammation, we shall generally, indeed, relieve our patient for the time, but we shall leave her more prone to the nervous affection than before, and permanently damaged by our mischievous activity."

Now, from what I have myself seen of these disorders, I have had abundant opportunities of corroborating the truth of Dr. Watson's practical remarks. In whatever cases general depletion, or often even local depletion only, has been employed, the pains, though relieved for a short time, have been more intense afterwards. In several cases of the *clavus hystericus*, where the patient has described her sufferings as most acute, and complained of a rushing of blood to the head, the pain has invariably been aggravated even by the application of a couple of leeches. These individuals do not bear the loss of blood well under any circumstances whatever; and, in a great majority of cases, I have found menorrhagia, or leucorrhœa, to be the exciting cause of attack. Again, examine the appearance and quality of blood drawn from these patients. It has an intensely bright, though rather pale hue of crimson, and there is a thinness, or wateriness, about it. It is deficient in fibrine and red particles. Now here, in place of abstracting blood, a more rational plan would be to administer port wine, iron, or quinine, and get the patient to take exercise daily in the open air. The excellent precept of the illustrious and sagacious Sydenham, relative to horse exercise in these disorders, is far too much neglected in the present day. The very intensity of the pains, as described by the patients themselves, has often given me an insight into the true character of these affections. There is one other practical observation which I would make relative to these excitable and highly sensitive individuals—namely, that as a general principle, narcotics and sedatives, such as opium, morphia, henbane, &c., do not cause sleep: they may numb or deaden the pain for a while, but they frequently produce *per vigiliam*, or the pa-

tient will tell you at the next visit that she dare not go to sleep; for the moment the eyes were closed the room was filled with horrid monsters. I am aware that this is owing to a peculiar idiosyncrasy in very many cases; but still, according to my observation, it is much more frequent amongst persons of a moveable or highly excitable temperament than in persons of phlegmatic habit. One lady whom I have attended for several years is invariably deprived of all natural rest during the exhibition of any preparation of opium, henbane, &c. In these cases ten grains of the compound galbanum pill given at bedtime acts like a charm, allaying pain, and procuring refreshing sleep.

Belper, South Derbyshire,
March 1850.

[To be continued.]

BRIEF NOTES ON THE DISEASE, INDIAN VILLAGE CHOLERA.

BY ASSISTANT-SURGEON MOORE, B.A.
Gwalior Contingent.

[Continued from p. 897.]

PART III.—continued.

WHEN cholera, in its severest form, had broken out in the jail at Lullut-poor, the following instructions were drawn up for the guidance of the native doctors attached to the regimental hospital. In the hope that the adoption of the practice may be attended with benefit to those seized with cholera, I now proceed to transcribe them for general information:—

1. Pots of water must be kept boiling day and night; so that, when required, no unnecessary delay take place.

2. As soon as the patient arrives at the hospital, the "naud" (large earthen pot) must be filled with water as hot as can be borne, to which common salt and spirits of turpentine have been added. The feet, legs, and thighs of the patient must then be stupefied; afterwards they must be wrapped up in his blanket.

3. Whilst the patient is undergoing this process of stupor or fomentation, you must ascertain from the patient himself, or from one of the persons by whom he has been attended, whether he has had one, or two, or more discharges

of rice-water fluid from the stomach and bowels. Should it appear certain, from their accounts, that he has not had more than two rice-water discharges from the bowels, or from the stomach, you will then place caustic pill No. 1 on the patient's tongue, and allow him to drink as much cold water as he likes. But, should he have been purged or vomited any number of times more than twice, you must then place caustic pill No. 2 on his tongue, and allow him to drink cold water as much as he calls for. If the pills should not be retained on the stomach at first, they must be repeated.

4. When the patient has been in hospital from one to two hours after admission, get ready the cupping-glasses and the cupping instrument; stupe the abdomen well with flannels wrung out of hot water, salt, and spirits of turpentine. Use friction, so as to bring blood to the surface, if there be any in the patient's body; then cover the abdomen with glasses wherever they can get a grip upon the skin. Cup quickly, and take away as much blood as you can get. If you do not succeed in drawing blood, change the glasses four or five times: this will answer all the purposes of dry cupping. When blood does not flow, so much the worse for the patient.

In every case you must cup, whether the patient has had one vomit or twenty vomits,—one purge or twenty purges of rice-water fluid; and in every case cold water must be supplied in abundance, to carry the caustic pills downwards, and dilute them in their passage through the intestinal tube. Externally, heat must be applied, so that, if possible, a warm perspiration may break out over the body.

These are the steps to be taken by you at once, and without waiting for my arrival at the hospital. The loss of time in the treatment of cholera, when the patient arrives at the hospital, is invariably attended with loss of life. The saving of time affords to the cholera patient the best chance of the saving of life.

5. In four or five hours after the cupping a blister must be prepared to apply to the abdomen. The cuts in the skin will require to be covered with thin paper or muslin. Should the blister vesicate, you are to dress the raw surface with blue ointment and simple ointment mixed together. When blood

does not flow under the cupping-glass, the blister seldom rises. So much the worse for the patient. The chances are against his recovery. This is in general the case when the pulse cannot be felt at the wrist. A supply of the following medicines must be kept in readiness at the hospital:—

Caustic pills, No. 1, consisting of lunar caustic, ten grains; water, six drops; *alta*, or flour, as much as will make a mass. To be divided into ten pills. Mark,—one grain in each.

Caustic pills, No. 2, consisting of lunar caustic, ten grains; water, six drops; *alta*, or flour, as much as will make a mass. To be divided into two pills. Mark,—five grains in each.

Caustic pills, No. 3, consisting of lunar caustic, ten grains; water, six drops,—dissolve; opium in powder, ten grains; emeticised antimonial powder, fifty grains; mix together; divide into ten pills. Mark,—dysentery and diarrhoea caustic pills.

Emeticised antimonial powder, consisting of antimonial powder, one hundred grains; tartar emetic, five grains; rub together for half an hour. Mark,—dose from five to ten grains.

This plan of treatment has been attended with a degree of comparative success. In the first and second stages of cholera I have trusted to these measures alone. With the results I have not been disappointed.

In the third stage of cholera, I do not hesitate to confess that neither cupping, nor caustic, nor emeticised antimonial powder, nor calomel, nor any other description of medicine, have rescued many victims from the grave. In the stage of collapse, in which the powers of life sank with unaccountable rapidity, a few lives have been saved.

Their recovery has taken place when the pulse was gone, and the heart beat feebly,—when the voice was hollow and inarticulate,—when the eye was sunk,—when the extremities were icy cold, and the muscles were spasmodically contracted into round hard balls,—when there remained no longer any strength to swallow medicine,—at such a moment, and when least expected, a profuse warm perspiration has broken out over the body; the sheets and bedding have been saturated with sweat. New life appeared to have been infused into the very blood of the corpse-like patient; his system has rallied; his vital ener-

gies have been rekindled; the secretions from the mucous surface had been checked by cupping externally, and by lunar caustic internally; whilst the emeticised antimonial powder accumulated in the system had at length come into active operation, and had found an outward vent through the relaxed pores of the skin.

Two Europeans lived in the same house in Calcutta. The cholera was raging in the neighbourhood. They did not escape its influence. They were attacked with the premonitory symptoms of the disease about the same hour on the same day. The attack was neglected in the first instance, and, in consequence, the symptoms progressed unfavourably in each case at an equal pace. Subsequently, the treatment adopted was precisely the same in each; they received the same medicines; they were attended with the same assiduity.

When the cholera had advanced to the third stage, and the patients had not strength to swallow medicine, orders were given to the servants to remain at the bed-side of each patient, to supply them with hot or cold drinks, should they ask for either. In the course of an hour after leaving the house, one of the patients died. It was reported, at the same time, that the second European was struggling in the jaws of death, but was as sensible as on the day previous to his seizure.

Shortly after the reported death of the first patient I revisited the house, and found the second European literally streaming in sweat. Every article on his person,—his sheets and bedding, were literally soaked with perspiration! the perspiration from the skin was warm, and was pouring out at every pore. His pulse had risen, and was easily felt in the large arteries. He had recovered his voice and speech, and expressed an inward conviction that his life was saved. His prediction proved true: he recovered, and soon afterwards quitted India for England.

On board the ship "Sophia," before the vessel was taken in tow by the steam-tug, two coolies, who had come from the same village, were seized with cholera.

They were seen by me at the same time. The medicines ordered for one were prescribed for the other. They were administered to each with care. As professional business rendered it ne-

cessary for me to visit a patient on shore, I gave strict orders to a trustworthy native to see that the coolies swallowed their medicine in his presence.

On my return to the ship, one of the coolies was reported to have died. The second I found lying in the same part of the between-decks fast asleep, close to the corpse of his fellow-villager. Although asleep, a heavy steam rose from his body. His rug felt as wet as if a bucket of water had been thrown over it. When he awoke he appeared exhausted. His pulse had returned at the wrist; the vomiting had ceased; the purging was checked; the tongue was warm, white, and loaded. With the aid of some mild purgatives he recovered, and was landed at Mauritius in sound health with the other Indian labourers.

Under more favourable circumstances the results of the treatment recommended have been more satisfactory. The subjoined cases are proofs to that effect.

CASE XI. — *Cupping externally — Lunar caustic internally — Recovery.* — Gundrup Sing, a political offender, confined as a prisoner in the jail at Lullut-poor, was removed to the hospital on the 7th October, 1849, at five o'clock p.m. His disease was cholera in its second stage. He had had several discharges of conjee-panee, or rice-water fluid, from the bowels, and had vomited the same kind of fluid from the stomach. His pulse was perceptible at the wrist, and ranged between 125 and 130 in the minute; its strength was indifferent; a sharp vibratory thrill was communicated to the touch. His body was warm, but the feet and hands were cold. The secretion of urine was suppressed; thirst was urgent; the muscles of the legs and thighs suffered from spasmodic twinges.

He was cupped over the abdomen in three places immediately after admission; from ten to twelve ounces of blood were taken away: the blood flowed sluggishly into the cups. Lunar caustic was administered internally. The vomiting and purging were instantly checked. The caustic was not rejected. Bottles filled with hot water were applied to the feet, and other parts of the body. At nine o'clock p.m. ten grains of emeticised antimonial powder were placed on his tongue, and washed down with cold water.

Between 11 and 12 o'clock, p.m.,

when I rode to the jail to see Dowriow Sing (Case No. X.), who had been brought in labouring under cholera in its third stage, Gundrup Sing was sweating at every pore. The pulse had fallen from 125 to 87, and had improved in strength and in softness. The blood in the system circulated more freely and more equally; the thirst had in a great measure subsided; and the spasmodic cramps in the muscles had ceased.

In three days afterwards he was discharged from the hospital convalescent.

CASE XII. — Whilst I was directing doses of brandy, æther, camphor, and laudanum, to be given to Sona, (Case No. VIII.) to resuscitate the powers of life, Jujoo, a female prisoner in the jail at Lullut-poor, was seized with looseness of the bowels, quickly followed by violent vomiting of a thin turbid fluid, resembling a solution of gum, or rice water. In the morning she had been troubled with an uneasy rumbling of the bowels, with pains in the back and loins; with languor, and depression of spirits, and constant inclination to evacuate the bowels. Her pulse was quick, but full, 100 in the minute.

Her's was an attack of cholera, merging from the first into the second stage. She was desired to drink half a pint of cold water. A pill, containing one grain of lunar caustic, and five grains of emeticised antimonial powder, was placed on her tongue, and washed down with another half pint of water.

In two hours afterwards, a profuse warm perspiration broke out over her body. The vomiting was checked. The looseness of the bowels was stopped. The thirst was relieved. The pulse fell to 80 from 100. After the administration of some mild aperient medicine in the course of the following day, to relieve the bowels, she was returned convalescent. Her recovery was satisfactory.

CASE XIII. — Doolua Khaugar, a prisoner in the jail at Lullut-poor, was admitted into hospital at 5 o'clock p.m., 23d November, 1849, with the symptoms of cholera. He had had five copious rice-water discharges from the bowels, and six rice-water discharges from the stomach. The secretion of urine was depressed. His extremities were icy-cold, and slightly affected with spasms. The pulpy extremities of the fingers and toes were shrivelled. The breath

was cold. The eyes were sunk in their sockets. The pulse, however, vibrated at the wrist. Its beats were sharp and contracted, ranging between 125 and 130. The impulse of the heart could not be felt. The action was weak and rapid.

Four cupping-glasses were applied to the surface of the abdomen, after the fomentations with hot water and spirits of turpentine. The patient was then allowed to drink water. A pill, No. 2, containing five grains of lunar caustic, was placed on his tongue, and washed down with half a pint of cold water. So great was the irritability of the stomach, that the pill was vomited twice. It was placed a third time on the tongue, and washed down with an ounce of water. He was not allowed to take any fluid for half an hour.

In less than half an hour after swallowing the caustic pill, a copious discharge of rice-water fluid, mixed with flakes of lymph and shreds of mucus, was voided from the bowels. In another half hour, another discharge, equal in quantity, was also voided: but this was the last. The pill was not vomited a third time. At the expiration of the half hour he was allowed to drink as much cold water as he wished. He felt his inside getting comfortably warm. At 8 o'clock, in consequence of the vomiting having ceased, five grains of emeticised antimonial powder were given.

At 10 o'clock P.M. I rode over to the jail. The patient had recovered his speech. The skin was warm and perspiring. The extremities were warm. The pulse had fallen to 90 from 125, and had expanded in volume. The thirst had diminished. The breath had become warm. The cuts in the skin were covered, and a blister was applied to the abdomen.

The blister vesicated, and was dressed with blue ointment and simple ointment, mixed. After the third dressing the gums became spongy, and the breath fetid. On the 24th, urine was evident in small quantities, and in a turbid stream.

The subsequent treatment consisted of mild purgatives, with five-grain doses of emeticised antimonial powder and calomel, at night. After the solution of the caustic pill in the stomach, and in its passage through the intestinal canal, he had not a single vomit, nor a single

purge of rice-water fluid. The first evacuation from the bowels was brought away by a mild purgative draught, and was greyish-white in colour. The recovery proved to be satisfactory.

CASE XIV. — Dherah, a prisoner in the jail at Lullutpoor, was removed to hospital, suffering from cholera in the second stage. He had had from eight to ten copious rice-water discharges from the bowels, and four vomitings from the stomach. His pulse was feeble and thready, but could be felt at the wrist. The muscles in the calves of the legs and in the arms were spasmodically contracted into hard round balls. The extremities were cold. The eyes, somewhat sunken, were bright and clear. The tongue was warm. Thirst was insatiable. The more water he drank, the more he desired to drink. The abdomen was sunken and doughy, inelastic under pressure.

The abdomen was covered with cupping glasses, after the feet and legs had been fomented with hot water and turpentine. The blood flowed sluggishly. From 8 to 10 ounces were distracted. Pill No. 3, containing one grain of lunar caustic, one grain of opium, and five grains of emeticised antimonial powder, was placed on his tongue, and washed down with cold water. The pill was retained on the stomach. In four hours afterwards a second pill was given. This also was retained. He was allowed to drink cold water in large quantity.

After the first pill he had one copious discharge of rice-water fluid from the bowels, containing a thick sediment. It filled a large earthen pot. The pulse at the wrist sank. The beats could not be felt. After the second pill the purging ceased. He had not a single vomit, nor a single purge of rice-water, or sero-mucous fluid, until a mild purgative draught was administered to clear out the bowels. The secretion of urine, suppressed in the first instance, was restored in the course of 24 hours. The pulse returned at the wrist, and although ranging above 100 beats in the minute, was fuller, and softer in volume, than when admitted.

In the evening of the 7th a large blister was applied to the abdomen, and vesicated. The raw surface was dressed with blue ointment. After the fourth removal of the dressing, salivation unequivocally declared itself. The subse-

quent treatment consisted in supporting his strength with sago, and in regulating the bowels with mild mercurial purgatives. His recovery was satisfactory.

CASE XVI.—Bhowamy-deen, cooley, was seized with cholera. The first rice-water discharge from the stomach occurred at 10 o'clock A.M. This was succeeded by a constant running from the bowels, of rice water fluid. Before 12 o'clock the muscles in the calves of the legs suffered from violent cramps. The powers of life were sinking rapidly. The extremities had become cold and shrivelled. Thirst was insatiable.

In this almost hopeless state caustic pill No. 2, containing five grains of lunar caustic, was placed on his tongue, and washed down with cold water. It was retained on the stomach. The cupping-glasses were applied to the surface of the abdomen. A few ounces of blood oozed out from the cuts in the skin. At 2 o'clock P.M., 10 grains of emeticised antimonial powder were given, and retained on the stomach. In the evening a blister was applied to the abdomen.

From the time that he swallowed the caustic pill in the morning, until 10 o'clock at night, he had but one rice-water discharge from the bowels. The stomach, however, remained perfectly quiet, and did not reject the antimonial powder. In the afternoon reaction set in. The skin became warm, the pulse expanded at the wrist: the circulation was carried on more freely and more equably. The extreme urgency of thirst subsided. The muscular cramps in the calves of the legs were relieved.

The subsequent treatment consisted of five grains of emeticised antimonial powder, and five grains of calomel, morning and evening. His strength was supported by sago. The functions of the kidneys were restored, and the evacuations from the bowels were tinged with bile, as the greyish white colour of the stools disappeared. His recovery was satisfactory.

These are a few of the cases selected from the list of recoveries. That the action of lunar caustic on the mucous surface of the stomach and intestinal canal tends to prolong life, when cholera has advanced to the third stage, is exemplified in the subjoined cases.

[To be continued.]

MEDICAL GAZETTE.

FRIDAY, JUNE 7, 1850.

In again turning our attention to the intended bill for restricting the sale of poisons, we consider it advisable to give an outline of the prohibitory law of France of the 29th October, 1846. The French law is chiefly directed to two points,—the general trading in poisonous substances, and the sale of poisons for medicinal uses.

Under the *first* division it is ordered that all chemists, manufacturers of, and dealers in those poisonous compounds, of which a list is annexed to the ordinance, shall have their places of business duly registered in the district; and that these substances shall be sold or delivered to those only who have been thus registered, and upon a written order signed by the purchaser. The sale or purchase of poisons shall be entered in a special registry at the time of such sale or purchase, and the nature and quantity of the substances bought or sold, as well as the name, residence, and profession of the buyer and seller, shall at the same time be inscribed in the registry.

The *second* division of this ordinance refers to the sale of poisonous compounds for medicinal use. This is restricted to licensed druggists (pharmaciens), and is then only allowed by the order or prescription of a qualified medical practitioner. This prescription must be signed and dated, and it must indicate at *full length* the dose of the substance prescribed, as well as the mode in which it is to be taken. A copy of the prescription must be made by the druggist at the time of dispensing the medicine, and the prescription itself, when returned, must have a note of the day on which the medicine was

dispensed, and a reference to the book in which it has been entered. This book must be kept for the purpose of judicial reference for a period of not less than twenty years. To each parcel of medicine so prepared, there must be attached a label containing the name and address of the dispenser, with the necessary directions for its external or internal use. *Arsenic* and its compounds are not permitted to be sold for any other than medicinal use, unless combined with other substances, according to rules to be laid down by recognised institutions. All arsenical preparations are to be sold only by licensed druggists, and then only to persons whose names and addresses are known. The quantity sold, and the name and address of the purchaser, must be entered at the time in a register specially kept for that purpose. The sale and employment of arsenic for the purpose of dressing seed corn, for embalming dead bodies, or the destruction of insects, is strictly and entirely prohibited. All parties concerned in the manufacture or sale of poisonous substances are ordered to keep them in a secure place, under lock and key.

The substances to which this law is applied in France are the following:—*Acetates* of Mercury, Morphia, and Zinc; Arsenious Acid, its compounds, and all preparations containing it; Prussic Acid; Aconite and its compounds; Sulphuric alcohol (eau de Rabel); Anemone Pulsatilla and its preparations; False Angustura; Atropine; Belladonna; Brucia; Bryony; Cantharides and its compounds; Ammonio-carbonate of Copper; Cevadilla; Chloride of Antimony; Muriate of Morphia; *Ammonio-chloride* of Mercury; Chlorides of Mercury; Hemlock and its compounds; Codeia; *Colocynth*; Conia; Cocculus Indicus; Colchicum; Cyanide of Mercury; Datura; Digitalis; Elaterium; White and Black Hel-

lebre; Emetina; *Tartar Emetic*; Spurge; Euphorbium; Bean of St. Ignatius; Oil of Cantharides; Hemlock; Croton tiglium; Hydriodate of Ammonia; Iodides of Arsenic, Potassium, and Mercury; Kermes; Cherry laurel and its compounds; Fowler and Pearson's solutions of Arsenic; Morphia; Narceia; *Daffodil*; Narcotine; Nicotia; Nicotine; Ammonio-nitrate of Mercury; Nitrates of Mercury; Opium; Oxide of Mercury; Picrotoxine; Jatropha Curcas; Rhus radicans; Savin; Solanine; Sulphuret of Antimony; Ergot of Rye; Stavesacre; Sulphate of Mercury; Strychnia; Tartrate of Mercury; Mineral Turpeth; and Veratria.

It must be obvious, on perusing this list, that it is very defective. It includes many substances the sale of which would not be likely to produce serious injury to the public, while it excludes others which should undoubtedly be ranked as poisons. Thus Croton oil is a prohibited article, while no restriction is placed on the sale of *Oil of Bitter Almonds*—one of the most potent poisons to which the public has access. The *Acetates* of Mercury and Zinc are ranked as poisons; those of *Lead* and *Copper* are not. The Iodide of Potassium is a prohibited drug, while *Cyanide of Potassium*, a most powerful poison, is altogether passed over in the list. Daffodil is treated as a poison, while *Phosphorus* and its preparations are not mentioned. Again, *Oxalic Acid* is not to be found in the list, while *Colocynth* figures as a "substance vénéneuse!" These important omissions are sufficient to show that those who prepared the list have been compelled to overlook the criminal use in the commercial necessity for the sale of these substances; and this is the great difficulty with which a legislator has to contend. The failure of the French government to bring out a satisfactory list may appear to be a sufficient justification of

our government in declining to make the attempt; but it nevertheless appears to us that a short list of some of those substances which are most frequently employed for suicide or murder, might be safely attached to the English Act. From a parliamentary return, made a few years since, it appears that out of 474 ascertained deaths from poison in England and Wales, during a period of two years, there were from *Opium* and its preparations, 196; from *Arsenic*, 185; from *Sulphuric Acid*, 32; *Prussic Acid*, 27; *Oxalic Acid*, 19; *Corrosive Sublimate* and Mercury, 15; and *Oil of Bitter Almonds*, 4. We do not see why the sale of these substances and their compounds should not be placed under restrictions somewhat similar to those adopted by the French Government. With regard to other noxious substances which are but little known to the public, the sale of these must be left to the discretion of the druggist, who should be *licensed* to sell them. We need not adopt the French principle of constructing a long catalogue of substances, some of which are much less injurious than others not to be found in the list.

It is a curious fact, that among the poisonous substances under the French law, the *Ammonio-chloride of Mercury*, or *White Precipitate*, is included; but no notice of this substance is to be found in any of the editions of Orfila's great work on Toxicology. It would therefore appear that the learned author either does not consider this substance as a poison, or he has altogether overlooked it; and yet, although not so active as some other mercurial compounds, there can be no doubt that it is a poison, and is capable of seriously affecting health, or even destroying life.* A case was tried at the last Chelmsford Assizes in which the question arose

whether White precipitate was "a poison." It was contended for the prisoner that the administering of this substance was not an offence under the statute of poisoning, because it is not possessed of noxious properties, and is not capable of destroying life. Orfila's work was actually cited in support of this view, because no mention was made therein of this substance being a poison. The accused was acquitted: a fact which shows to what serious consequences the omissions of eminent writers may lead. There can be no doubt that this acquittal was based on a medical mistake; for the list of poisons published by the French Government in 1846 might have been quoted to show that the sale of White precipitate, except under restrictions, was strictly prohibited in France on account of its being a *poisonous* compound of mercury. Orfila's treatise contains an account of a number of substances far less active as poisons than this. White precipitate is largely used by the poor in this country for the treatment of diseases of the scalp: it is readily sold by druggists to all applicants, but in respectable shops we believe it is the practice to label it "poison." If this substance should be again administered and destroy life, the Essex case may be adduced to show that, upon high judicial authority, White precipitate cannot be regarded as a poison; and therefore that the person with whose death the prisoner is charged, must have died from some other cause. If the prisoner in the above case has been properly acquitted, how can any one who may hereafter administer this substance be convicted of the crime of poisoning? In the meantime we learn, from the results of this trial, that that which is a poison according to the law of France, is not a poison according to the law of England, as interpreted by one of the learned judges.

* It has destroyed life in two instances.

The new legislative measure will, we think, go far enough, if it prohibits the sale, except under close restrictions, of the few substances which have been enumerated as most frequently serving the purposes of suicide or murder. They should be sold only by *licensed druggists*; and a *registry* indicating the names and addresses of the purchasers, and the quantity sold, should be kept. This plan will neither prevent the unlawful employment of poisons, nor will it put a stop to homicide by poison; but it will assuredly be an improvement on the present system, under which arsenic may be purchased of grocers or small shopkeepers in any quantity, by any person, and on the most frivolous pretences.

Reviews.

The Fifth Fasciculus of Anatomical Drawings selected from the Collection of Morbid Anatomy in the Army Medical Museum at Chatham. Drawn on stone by GEORGE H. FORD. Folio. 18 plates. London: R. and E. Taylor, Red Lion Court, Fleet Street. 1850.

THIS is a most valuable contribution to pathological anatomy; and the publication of such a work reflects credit upon all concerned in its production. It is by contributions of this kind that professional men are made fully acquainted with the rich store of pathological specimens collected in museums attached to hospitals and infirmaries; and we should be glad to find that the example thus set by our military brethren was more generally followed.

Nine years have elapsed since the publication of the preceding fasciculus. The present part refers to illustrations of diseases of the *urinary organs*, and contains eighteen plates, each having three or four well-executed lithographic drawings. We are informed that the museum contains 248 preparations illustrative of urinary pathology. Sixty of these have been selected for illustration in the fasciculus before us; and of

these, 27 are devoted to diseases of the kidney and ureter, and 13 to diseases of the bladder. To many of the illustrations there is attached a short descriptive history of the case. Plate II. represents tubercular or scrofulous deposits in the kidney. The drawings are very clearly executed, and represent the diseased condition as accurately as it can be represented without colours. Plate IV. contains an illustration of an enormously enlarged kidney, weighing about two pounds and a half. It is thickly studded with cysts, varying in size from a pea to an orange. It was taken from a man, set. 46, who died after twelve months' illness. The remarkable part of the case is that the symptoms were very obscure, and did not point at all to this condition of the kidney. There was pain in the chest, dyspnoea, effusion into the serous cavities, oedema of the feet, and diarrhoea. The urinary secretion presented nothing remarkable. Plate XIII. represents calculi in the bladder, and one of these presents a very remarkable form: it closely resembles the upper extremity of the left femur. Parts corresponding to the head, neck, and trochanter major, are plainly visible. It is a uric acid calculus, coated with triple phosphate. The circumstances which led to this curious formation are not stated. The illustrations of strictures of the urethra are well worthy of attention.

We commend this work to the notice of all those who take an interest in the progress of pathological anatomy.

On the Principles of Health and Disease: an Inaugural Dissertation of the University of Edinburgh. By DAVID NELSON, M.D. Edin., Physician to the Queen's Hospital, and Professor of Clinical Medicine in Queen's College, Birmingham. 8vo. pp. 118. London: Churchill. Birmingham: Davies. 1850.

DR. NELSON informs his readers in his preface, that it was formerly incumbent upon all Graduates of Physic in the University of Edinburgh, to publish their inaugural theses; but that within the last ten years this has been rendered a voluntary act. The University probably learned by experience that the profession was not so much the gainer, as was the printer, by this compulsory publication of theses.

We quote what we may term the author's apology for the publication of his thesis:—"Partly in compliance with what I conceive to be the better, as well as the older system, and partly from a conviction that certain points are herein advocated that may prove, at present, of some public utility, I send forth this Inaugural Discourse, fully persuaded that, under such consideration, none of my professional brethren will deem it an inappropriate mode of introducing myself to their notice, after having been honoured with hospital and collegiate appointments so distinguished, and so responsible."

The work itself is divided into five divisions. The *first division* comprises introductory observations on the primitive conditions of man, on his subsequent degeneration, on the causes of varieties of temperaments and constitutions, and on the general circumstances conducive to health and disease.

The *second division* treats of the conditions necessary to health. The consideration of this portion of his subject is introduced by observations on the influence of vital forces on chemical agencies operating in the living body under the control of a twofold instinct, on the one hand comprehending all those acts of which we have a mental consciousness, on the other, those of which we have none; namely, the functions of nutrition, secretion, and the like. Among the conditions of vital operations the author enumerates heat, cold, light, water, air, food, &c. &c.

In the *third division* the author treats of the agencies which induce disease, more especially the paludal poison, typhus miasm, miasm of cholera, of scarlatina, measles, small-pox, &c. &c., the virus of hydrophobia and syphilis, parasites, retained excretions, morbid deposits and structures.

The *fourth division* teaches the nature of the reaction of the vital powers by which the effects of injurious agencies are overcome, and of the guidance this should afford in the treatment of disease.

The *fifth division* embraces a general survey of the extended modes of inquiry and management which might tend to the decrease of disease. This division of course involves the consideration of various sanitary measures, in their medical and legislative bearings, with the several modes in which these shall be carried out.

The almost endless topics, each demanding an extensive and serious discussion and prolonged study for their due elimination, which are involved in the consideration of the principles of health and disease, render it almost morally and physically impossible that they should be otherwise than superficially glanced at within the compass of an inaugural dissertation. Under such circumstances our readers will not be surprised to find that although the author displays a large acquaintance with the scientific and practical parts of the inquiry he has proposed to himself, that he has nevertheless merely produced a book containing a very abundant collection of (for the most part) well-known facts which have long been the common property of the medical profession.

The Mineral Waters of Schwalbach. By ADOLPHUS GENTH, M.D. 8vo. pp. 137. Wiesbaden. 1849.

"THE sole purpose of this little work," observes the author in his preface, "is to present the physicians of England with a short sketch of those *moments* which may be deemed serviceable in regard to the pharmacological importance of our waters" . . . "it has not been my object to get up a mere *every-day* description of the peculiarities of our baths, addressed equally to the great mass of the '*Brunnen visiting*' public, and to the medical profession. To such hybridous productions I entertain a decided aversion."

In introducing this volume to the notice of our readers, we would echo the words of the author:—

"May this little treatise meet with a favourable reception among my professional brethren in the British dominions!" We proceed, therefore, to lay its contents before our readers.

Dr. Genth first describes Schwalbach as a watering-place, its situation, salubrity, &c., which are of themselves sufficiently attractive, independently of its mineral springs, baths, &c.

The waters of Schwalbach are strongly chalybeate. Dr. Genth treats of the physiological and therapeutic actions of its several elements, the iron, the carbonic acid, and the water separately, as well as of the effects of these collectively. The author does not omit to notice that independently of the established and known therapeutic agency of chalybeate

waters, the influence of local circumstances must be considered in estimating their value in reference to treatment, with regard to which Dr. Genth enumerates the following circumstances:—

1. The water is in the state in which nature produces it. Chalybeate waters, as the author observes, lose their carbonic acid by conveyance and by keeping.

2. The internal and external exhibition can be combined.

3. The patient no longer lives and moves in that atmosphere, and in the same mode of life, as that in which he became ill.

Undoubtedly this last is the potent spell which dissipates the effects of wear-and-tear, and mainly renovates the exhausted frames of the visitors of watering-places, whether in England or on the continent.

The author in the next place mentions the chief indications for the exhibition of the Schwalbach waters. These, as our readers will conclude from the chemical characters of these waters, are conditions of debility and impaired sanguification. The work closes with directions for the employment of the waters, the choice of the spring, and the regimen to be concurrently observed.

We cordially commend this little essay to all practitioners who may be consulted as to the selection of a German watering-place; as, indeed, also to the profession generally, on account of the information it conveys on the subject of the composition and therapeutic agency of chalybeate waters.

Proceedings of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, May 28, 1850.

DR. ADDISON, PRESIDENT.

On the Use of the Speculum in the Diagnosis and Treatment of Uterine Disease.
By ROBERT LEE, M.D. F.R.S. &c. &c.

The author commences this paper by observing that the *speculum matricis* was said by Ætius to have been invented in the days of the Emperor Domitian, but that it must have been known to the ancients at an earlier period. In 1818, a bronze instrument, consisting of three branches,

two handles, and a screw in the centre, was dug out of the ruins of Pompeii, which has been preserved in the Museum at Naples, and of which there is a description and representation in Vulpe's work, which, through the kindness of Dr. Greenhill, of Oxford, was placed on the table of the Society. This instrument is called *speculum magnum matricis*, and the author observes that there can be doubt that it was intended to bring the os uteri into view, and is probably one of the most safe and perfect trivalve speculums that has since been invented. Allusions are then made to the specula of Avicenna, Ambrose Paré, Albucan, and Joannes Ruffius, some of which were not uterine specula, but midwifery instruments.

The author then states that in 1801 Dr. Recamier, of Paris, began to treat ulcers of the uterus and vagina with topical applications, like those of the throat. By means of a slender tin tube he applied to the ulcerated surfaces various simple substances, as Mel. Rosarum and Syrup of Carrota, and to these he states that he owed their marked amelioration. In the year 1816 Dr. Recamier enlarged the diameter of his conical tube, that the morbid parts in cancer might be brought more completely into view, and cauterization employed. Of this treatment the most favourable results were likewise published, although its total inefficacy was soon demonstrated. The cruel practice of extirpating with the knife the whole or portions of the cancerous, or supposed cancerous uterus, now began to prevail, and became, both in Paris and London, the source of great popularity and gain to some individuals, and most flattering reports of the results published. In the memoir on Amputation of the Neck of the Uterus, presented by Mons. Lisfranc to the Institute of France in 1834, the author stated that of ninety-nine operations for cancer of the uterus, eighty-four had been successful. The statements made in this memoir are now universally disbelieved, and no man possessed of the most slender stock of sound pathological knowledge, and of the ordinary feelings of humanity, would at the present time propose to extirpate the whole or any portion of a cancerous uterus. In the hands of M. Recamier and M. Lisfranc, the speculum led only to barbarous and useless cauterizations and operations.

The instrument soon came to be extensively employed in the investigation of venereal diseases in the prisons, hospitals, and dispensaries of Paris, and many morbid appearances, very vaguely defined, were reputed to have been discovered by the aid of the speculum which otherwise must have escaped detection. The speculum then be-

came an instrument of police, and the sanitary laws of the principal cities on the continent were regulated by the information thus supposed to have been obtained. The method of conducting the examination of the prostitutes with the speculum is then described; and it is stated that some of the most eminent surgeons in Germany and France conducted these public examinations, and endeavoured to perform the difficult and indelicate task of separating the clean from the unclean.

The object of the author in this communication is stated to be to give concisely the results of his observations during the last twenty-three years on the use of the speculum in the diagnosis and treatment of uterine diseases, believing that at the present time it is equally important to the medical profession, and to society at large, that the legitimate use and real value of the speculum in practice should be accurately defined and made known.

In the two great classes of organic diseases of the uterus, malignant and non-malignant, and in all the displacements of the uterus, he says he has derived little or no aid from the speculum in their diagnosis and treatment. Several cases of ulcerated carcinoma are then related, in which the speculum, and ignorance of uterine pathology, appeared to have led to the commission of the most grievous mistake.

The author then proceeds to give a sketch of uterine diseases before the middle period of life, and observes that an examination of the physical condition of the uterus in unmarried women, either with or without the speculum, he has always refused to make, even when requested to do so, unless pain, severe and almost constant, in the region of the uterus, arrested leucorrhoea or hæmorrhage which did not yield to treatment, and where the symptoms did not make him strongly suspect the presence of some displacement or organic disease. In cases of obstinate leucorrhoea he has often employed the speculum in married women after he had failed to detect the existence of organic disease by the ordinary mode of examination. The appearances observed in these examinations are then minutely described, and the fact stated that the author had never seen ulceration of the os and cervix uteri, in such a case, which was not of a specific character, especially scrofulous and cancerous. The lamentable effects of applying potassa fusa to the os and neck of the uterus are then given in the histories of several cases.

The following most important statistical statements were then given by the author:—

"In the year 1832," he says, "my colleagues at the Saint Marylebone Infirmary, Dr. How, Dr. Sims, Mr. Stafford, and

Mr. Perry, late Secretary of the Society, at my request desired that the uteri of all the women who died in the wards should be carefully examined, and that they should be preserved for my inspection, when any morbid appearance was observed. From 1017 post-mortem examinations of females of all ages, made by Dr. Boyd (after deducting those of children and others, in which special mention is not made of the uterus), there were found 708 where either the state or weight of the uterus was noted. In 18 of these there was congestion or inflammation which had no specific character, and in some the inflammation was limited to the fundus, and could not have been detected unless the uterus had been removed or cut open. In at least 3 there was enlargement and induration, which did not appear to have any specific character, and in 2 there was extreme wasting; 24 were puerperal cases, 13 dropsy of the ovaries or fallopian tubes; in 81 fibrous or bony tumors; and in 21 cancer." My impression is, adds Dr. Boyd, in the same report, that ulceration of the neck or mouth of the womb is an exceedingly rare disease, else I must, he says, have observed it; having cut up and weighed many hundreds, it could scarcely have escaped my notice.

Dr. Allen, the present resident medical officer at the Saint Marylebone Infirmary, has held the office about twelve years, and he states that he has examined or been present at the examination of the bodies of more than 1000 adult females, and of these he does not believe that he ever saw more than 20 examples of ulceration of the os uteri of any kind, scrofulous or venereal, excluding cases of ulcerated cancer of the uterus, which were known to exist before death. Dr. Allen further states that he has observed in some cases a portion of the mucous membrane of one lip slightly abraded: this he has seen occasionally, but not often.

Mr. PRESCOTT HEWITT was six years curator of the museum of St. George's Hospital, and conducted all the post-mortem examinations. He states that during that time he could not have examined fewer than 600 uteri; and very seldom, if ever, did he meet with anything which could be called ulceration of the os and cervix uteri independent of scrofula and cancer. Mr. George Pollock held the same office for three years, during which time he examined the bodies of 800 women, and in every case the uterus was cut open and examined. In four uteri, ulceration was observed; but three of these were scrofulous patients, and scrofulous ulceration existed in other organs. In the fourth case the ulceration must have been cancerous, as it involved the vagina extensively

as well as the os uteri. Mr. Hewett and Mr. Pollock did not, therefore, observe a single example of simple ulceration of the os and cervix uteri in the 900 uteri they examined; which confirms the accuracy of the opinion given by Dr. Boyd, that ulceration of the neck or mouth of the womb is a very rare disease.

Mr. Gray succeeded Mr. Pollock at St. George's Hospital, and he examined 180 uteri. Distinct ulceration of the os and cervix was only observed by him in three uteri, and the nature of the ulceration in these three cases was not determined with certainty. Mr. Gray states to me further, that redness, slight abrasions, and granulations, were sometimes, but not frequently, observed.

Neither in the living nor in the dead body (says the author) have I ever seen ulceration of the os and cervix uteri, except of a specific character, and especially scrofulous and cancerous; but I have met with a considerable number of cases in which it had been affirmed by others to exist, after deliberate and repeated examination by them with the speculum, where I ascertained that ulceration did not exist in the os and cervix uteri, nor disease of any kind.

Cases are then given in which this gross mistake had been committed, and the paper concludes with a remarkable case of a lady, *æt.* 50, communicated by Dr. Jas. Copland, in which the speculum was used with fatal effects, where it was ascertained after death that the uterus and all its appendages were perfectly healthy. There were marks of recent violence at the orifice of the vagina, and the hymen was torn. Lymph recently effused was found coating the upper part of the spinal cord.

Supplement to a Paper on Fibro-calcareous Tumors, and Polypi of the Uterus. By ROBERT LEE, M.D., F.R.S., &c.

Since the publication of a former paper on the same subject, the author states that he has succeeded in injecting both the arteries and veins of fibrous tumors, and that there are preparations in the museum of St. George's Hospital in which veins of very considerable size are seen passing from the central parts of the tumors to their surface in a winding direction, and gradually enlarging till they terminate in the uterine veins. Large cavities containing viscid fluid are then described as having been found in fibrous, which had led to the supposition during life that they were ovarian cysts, and to the operation of tapping being performed. The author then proceeds to relate the history of a remarkable case of fibrous tumor in the anterior wall of the uterus, in the very centre of

which he found an abscess, which, he says, has rarely, if ever, before been observed by any pathologist. This abscess appeared to result from acute inflammation, excited by four balls, the composition of which he could not ascertain, having been passed up to the uterus at bed-time, and to the introduction within the uterus by another practitioner of a bent wire with a small wooden handle, which, he thinks, was probably the bent metallic probe, or blunt wire, sold in the shops under the name of Simpson's sound.

WESTMINSTER MEDICAL SOCIETY.

Saturday, April 27, 1860.

DR. E. W. MURPHY, PRESIDENT.

Phosphate of Ammonia, and its Employment in Gout and Rheumatism.

DR. S. EDWARDS, the author of this paper, remarked that no mention was made of the therapeutical uses of this salt in any of the standard works of *materia medica*, and subjoined the following description of it, being an epitome of the researches of Mitscherlich upon it:—

Phosphate of Ammonia.—The mutual action of anhydrous phosphoric acid and ammonia has not been studied: they probably give rise to *amide*. The neutral phosphate of ammonia may be obtained pure by saturating phosphoric acid with ammonia, or carbonate of ammonia, and carefully evaporating, so as to avoid the production of an acid salt. It may also be formed by adding carbonate of ammonia to the acid phosphate of lime, obtained from bone earth, till no further effervescence or precipitate of phosphate of lime follows filtering and evaporating, taking care, however, to leave slight excess of ammonia. The solution, left to itself, deposits the salt.

When taken internally, in the ordinary dose of ten grains, it produces no very sensible physiological effects; it occasions, sometimes, a slight feeling of nausea, accompanied with heat of the epigastrium, immediately after which, if the surface be kept warm, it acts as a stimulating diaphoretic. It is also a diuretic. When used in cases where uric acid exists in large quantity in the system, it shortly produces a large deposit of urates in the urine. The author then made some few remarks as to the proximate causes of gout and rheumatism, considering them in the light of blood diseases, arising from a morbid matter circulating in the blood, originally formed in the primary and secondary assimilating processes, thereby occasioning a disturbance

of longer or shorter duration, in the nutrition of parts to which it is attracted. He considered there was sufficient analogy between the two affections to cause him to view them as mere varieties of the same disease. Reference was made to the opinions of Barthez and Chomel, who considered it almost futile to attempt a diagnosis beyond marking the parts affected in each, and that this was objectionable, as referred to by Dr. Todd, who asserts, "Gout shows, at first, a decided predilection for the small joints—those of the hand and foot, but in time *all* the articulations are obnoxious to it, and not only they, but also tendons, ligaments, bursæ, and synovial sheaths." Dr. Edwards referred to the case of an old lady who had been troubled with gout for some years. The metatarsophalangeal articulations of the great toes frequently threw out chalk stones, and a fluid containing urate of soda; when this subsides, she is troubled with chronic rheumatism of the whole body, but on the gout and secretion returning, the rheumatic pains entirely leave her, showing such a connexion between the urate of soda and the rheumatism as to warrant the belief of their being cause and effect. Dr. Edwards then went on to state that from a number of chemical and microscopical experiments, he had arrived at the conclusion that these diseases had an excess of lithic acid for their essential cause; that the elements of this acid and its combinations are supplied by the nitrogenized elements of the food, as well as by the changing tissues of the body, a sufficient reason why the disease should attack the young and badly nourished, as well as the older, more plethoric, and they who live high. Dr. Edwards confirmed the fact, that in gout uric acid existed in the blood, and in several cases he had obtained rhomboids of uric acid from the same fluid in rheumatism in much larger proportions than in health, but not to the same extent as in gout. This was accounted for from the circumstance of the lithic acid being partially thrown off by the skin and kidneys in the one, whilst it was retained in the system in the other. Dr. Edwards had experimented in fifteen cases, and made reference to Simon, and also to Becquerel's cases in proof. The urate of soda had been considered to be a secretion peculiar to gout; Dr. Edwards referred to Dr. Macleod's statement of the articular cartilages in capsular rheumatism, being covered with it occasionally, also to a case of rheumatic gout, given by Dr. Golding Bird, where an eczematous eruption of the legs was frosted over with microscopic crystals of it; also, in a case which he had himself observed, where a patient had died of heart affection, deposits of urate of soda existed in the

valves of the heart. This patient had had rheumatic fever, but not gout. Reference was made to the connexion between rheumatism and granular disease of the kidneys, and some other renal affections, in which the relative proportions of the ingredients in the urine are diminished, and, according to Rayer, are found to exist in the blood and serous effusions; and in the examination of the urine, Prout and Christison state, according to their observations, the lithates are most strikingly deficient. The author considered himself justified in asserting, that in these two diseases there was a large and undue proportion of lithic acid or its compounds in the system, and asked, may not this deposition, then, occasion such an extent of acrimony in the fluids of the body as to irritate, and excite to a morbid action, the lymphatics and minute terminations of the arteries in the several parts of the body, and not improbably of the lining membrane of the larger arteries, becoming in fact, a source of irritation wherever deposited, more especially in parts such as the joints and sheaths of the ligaments and tendons, which, being inextensible, would sooner probably become affected by such distempered excitability. Dr. Edwards then spoke of the physiology of the beneficial action of the phosphate of ammonia in these affections. On being taken into the system, and coming in contact with the uric acid or urate of soda, it became decomposed, a phosphate of soda and urate of ammonia would be produced—thus exchanging a very insoluble for very soluble salts; but this was not all, for Baron Liebig had shown that the phosphate of soda has a remarkable effect upon uric acid, rendering it soluble with facility in water. By these means, therefore, the free and combined uric acid existing in the system in these diseases will be dissolved and rendered capable of easy elimination by the kidneys. Dr. Edwards then remarked that he had used the phosphate of ammonia in almost every variety of gout and rheumatism, and almost always with the most beneficial effects. He had frequently warded off attacks of gout by its early employment. Before using it, he generally prefaced it by a purgative of calomel and colocynth, or some other, and in the acute articular rheumatism adopted the usual local and general antiphlogistic treatment. Under its use the tendency to attack fresh joints had diminished, and the chronic form, so frequently left behind from the acute, generally obviated, and when existing usually yielded in a few days. It had been found extremely beneficial in some of those cases of a local character which bear a resemblance to neuralgic disease. Dr. Edwards also drew attention

to an important fact in connexion with the use of this salt in *acute rheumatism*. He had employed it in fifteen cases, and in no one had heart symptoms accompanied it. When it is remembered that heart complication occurs in about one-fifth of the cases of rheumatic fever, the subject deserves attention. Dr. Edwards had found it of great use in subduing the swelling which so frequently occurs subsequently to gout, and spoke highly of its powers in preventing the formation of chalk stones, as well as arresting their increase when forming. He also described its solvent power as great in uric acid gravel, and asked, might it not be available in uric acid calculi? He had given it a comparative trial with phosphate of soda and benzoic acid, and found it far more useful in its effects. In some few cases in gout he had used a lotion of it, with good and soothing effects, especially where a concretion of urate of soda appeared to be forming.

SURGICAL SOCIETY OF PARIS.

May 22, 1850.

PRESIDENT, M. DEGUISE, père.

Treatment of Ascites by the Injection of Iodine.

M. DEBOUT related the particulars of a case in which this treatment had been employed. Four punctures were made at short intervals—viz. Feb. 14th, March 13th and 31st, and April 19th; it was at the last date that iodine was employed: on the following day severe pain appeared, and the patient died on the 24th. Acute peritonitis was found on examining the body.

M. Debout also stated that in experiments performed by M. Velpeau, the animals died when iodine was injected in a greater strength than one-seventh or eighth part in the solution.

Tracheotomy in Croup—Death.

M. DEMARQUAY related the particulars of a case of croup in an infant, in which he had recourse to the operation of tracheotomy, and in which the case had proceeded so well that the canula was withdrawn on the fifth day. On attempting to swallow, everything passed out at the opening in the trachea. M. Demarquay endeavoured to re-introduce the canula, but could not succeed. The patient died nine days afterwards from want of nourishment. On examining the body, the inflammation was found to have extended to the bifurcation of the trachea, where a small submucous abscess existed. The larynx was covered

with false membrane; the epiglottis was healthy. The œsophagus was inflamed, and of a deep red colour.

M. Demarquay stated that he had not made any attempt to introduce an œsophagus tube, for fear of adding laceration to the injury already existing in the larynx.

A short discussion followed on the use of the œsophagus tube in such cases; some members being of opinion that it was unattended with danger, others that it was not a safe practice.

ACADEMY OF MEDICINE OF BELGIUM.

March 22, and April 27, 1850.

Re-vaccination.

A REPORT was read on a work by Dr. Van Berchem on variola and varioloid disease. Among the propositions contained in this report two in particular were discussed. The first, that variola and varioloid disease are both the same disease, differing only in the suppurative fever that attends variola. The second had reference to re-vaccination. It appeared to be the opinion of the Academy that re-vaccination is indispensable; that the period when it should be practised is not fixed; and that it is desirable that re-vaccination should be performed on a large scale, under the authority of the Government.

Cholera Reports.

Two reports were read—one on an essay which adopted the cryptogamic theory, and proposed homœopathic remedies to destroy these organisations; the second compared the symptoms of cholera with those of poisoning from arsenic, and proposed arsenic as a remedy! An angry discussion on homœopathy followed, in which its weakness was shown by the personalities and invectives in which its advocates indulged.

ACADEMY OF SCIENCES, PARIS.

May 20, 1850.

Gutta-percha Sounds and Bougies.

M. CIVIALE read a report, in his own name and that of M. Pelouze, on a communication by M. Cabrol relative to the value of gutta-percha sounds and bougies. The reporters objected to these, in the first place, that they do not afford those indications of the nature and form of the stricture which are furnished by soft wax

bougies. Secondly, that where the parietes of the urethra are much indurated, the gutta-percha bougies yield and bend, and become quite useless. Thirdly, that in similar cases this material does not sufficiently resist pressure to permit the use of a stylet which would pierce its substance and wound the urethra. Fourthly, the instruments in present use are capable of further improvement.

Influence on the Fetus of Iodine administered during the latter months of Pregnancy.

M. DELFRAYSE, of Cahors, submitted some observations in reference to the proposal of M. Depaul to practise repeated blood-letting during the latter months of pregnancy in women having distorted pelvis, in order to diminish the size of the fetus, and thereby facilitate its delivery in such cases. M. Delfrayse proposed to substitute for this treatment the administration of iodine daily, after the sixth or seventh month of gestation. M. Delfrayse had made experiments with this view on animals, and had also employed this treatment successfully in the cases of two women who had previously never borne living children on account of deformity of the pelvis.

Hospital and Infirmary Reports.

FELLOWS' PRIZE REPORTS

OF

CASES OCCURRING IN UNIVERSITY
COLLEGE HOSPITAL,
SUMMER SESSION 1845.

By C. H. F. ROUTH, M.D. Lond.

TANNER JAMES KNIGHT, *et. 34*, admitted Friday, July 4, 1845, under Dr. Taylor.

Case—*Secondary syphilis—Nodes, &c.—Acne punctata, psoriasis—Congestio hepatis—(Cystic oside in the urine ?)*.

Of moderate stature, stout conformation, scrofulous diathesis, fair complexion, light hair, blue eyes. A corn-miller for the last twelve years without interruption, except when ill. Single. Resides at Chatham, in an open and dry situation, but he works at Frindsbury, near Strood. For the last twelve months he has been engaged in a corn windmill, very damp. Prior to this he worked at Canterbury, in a perfectly dry mill. Arrived in London yesterday morning. He is accustomed to eat meat three

times a day. On the average he drinks from Oijj. to Oiv. beer daily, sometimes more, but seldom spirits. Is generally intoxicated once a month. His work is sometimes very heavy, not unfrequently working day and night, sometimes two nights consecutively, if the wind holds. On such occasions he takes, in addition, during the night-time meat again, and a quart of beer. When there is no wind his work is lighter—simply the repair of the stones and removing the bags of flour. Always well fed and warmly clad. Of a cheerful disposition.

Hereditary predisposition.—Father died, *et. 76*, of dropsy. His mother, *et. 67*, of a cardiac affection. Has one brother and two sisters, all healthy.

Habitual state of health.—He has generally been healthy and strong. Never had small-pox or scarlet-fever. Had hooping-cough at seven years old; measles at 9. Had always had a slight cough about him, but never hæmoptysis. He had an inflammation at the heart (?) seven years ago. It was accompanied with pains in the left side, towards the lower ribs. He could not take a long breath without pain. No examination, however, was made with the stethoscope, and it was unaccompanied with rheumatism. He was very feverish at the time, and was bled for it, and got better. Has had gonorrhœa two or three times. He had it last four years ago, and he got well in about six weeks. Has had chancres twice. The first time three or four years ago. They were not burnt with caustic; an ointment only was applied. He got well in less than two months. Three months after the first attack (about three years ago) he had chancres a second time, but he was not aware of the circumstance till a bubo made its appearance in each groin, for which he sought medical advice, and then the chancres were also observed. Ointment was prescribed for the latter, and a poultice applied to the buboes, and he was given some pills and a draught. He cannot remember if his throat was also sore at the same time. The buboes broke in three weeks, but did not heal till eight months afterwards. About a twelvemonth from the time he first observed the cancers (the second time) he first noticed an eruption with little heads, containing matter in them, about the throat, which he imagined were boils, but he did not notice any eruption elsewhere. Never had rheumatism. He continued comparatively well up to last February.

Present attack.—Last February he was seized with a sort of weakness in his legs, so as to impede his walking as well as before, or as far. Towards the end of the same month he observed that his legs began

to pain him the moment he got in bed and was a little warm. These pains disappeared in the morning about seven or eight o'clock. Lately he has lost a good deal of flesh. He formerly weighed twelve stone, and now only eight and a half. For the last month or five weeks he has been under the care of a medical gentleman at Strood, who gave him medicines, but which did him no good. Had left off work since February, but he has not kept his bed. He walked from Rathbone Place to the hospital. The original attack in the shins did not begin with any degree of pyrexia, but came on gradually. He has been all his life much exposed to wet and damp, and when out of work very fond of walking and shooting in marshes.

Present state.—The colour of the skin generally over the body is natural. On the back of the neck and upper dorsal region there are several small papules, varying from the size of a small pea to that of a bean: in appearance oily and greasy, of a dirty pink colour. The skin around is red and inflamed. In the centre of these, a black point, smaller than a pin's head, is occasionally observed. In others there is a yellow opacity in the centre, from the presence of matter.

There are, besides, a number of irregular seams or furrows, which are white, and more depressed than the surrounding skin.

Over the upper part of the ankle, and lower one-third generally of both legs, and the anterior part of the right forearm, are scattered here and there a few small spots of eruption, which are scaly in kind, and copper-coloured. They are rougher than the surrounding skin, but not sensibly elevated. The colour does not disappear on pressure.

He does not appear emaciated; no oedema of the extremities at present, but he states that they swell at night. Over the anterior surface of the shin in the lower one-third of the right leg, and on the inner side of the spine of the tibia, there are a number of irregular elevations of the bone, four or five in number, extremely painful on pressure. They are situated lower down in the left leg. There is also one large swelling on the lower one-third of both femurs, both irregular to the feel and very tender. The skin over these parts is thin, but not red. Towards night these are the seat of a sharp constant burning pain, so severe as to prevent his sleeping, and the pain shoots up occasionally to the thigh. It generally comes on about seven or eight P.M., and disappears about the same hour in the morning. During the day generally there is no pain except on pressure; but he is very weak upon his legs, and walks lamely, and if he stands

long upon them they become a little painful, but not nearly so much so as at night.

There are no rigors. Skin hot, comparatively dry. Does not sweat at all. There are no general pains flying about the body. Feels tired, weak, and restless. Expression of countenance natural. Cheeks somewhat red. Lips of the natural colour. Over the face are some red spots, varying from the size of a pea to that of a fourpenny-piece; but few in number of the latter size. The colour disappears on pressure. Pupils contracted. Organs of senses not affected. No headache or giddiness. Slept very badly last night, not more than an hour altogether, in consequence of the severity of the pain. His memory (as to dates) does not seem very good. Spirits good. Rather drowsy in the day. No tenderness or weakness along the spine.

Thoracic organs.—The right infra-clavicular region is duller on percussion than the left, extending downwards to about one inch above the nipple. This dullness is more marked on and above the clavicle. The respiration is weaker under the right clavicle, with some moderately-fine dry crackling at the end of the inspiration and beginning of expiration. Behind, the right supra-spinous fossa is duller than the left, extending a little way to the infra-spinous region. Respiration is weaker on the right side. There is no difference in the vocal vibrations of both sides. In other parts of the chest the respiration is quite healthy.

Heart.—Dullness begins on the left border of the sternum, extending about two inches externally. It reaches as high as fourth rib. Apex felt beating opposite the sixth. Impulse is rather weak. Sounds healthy. A slight pulsation is felt in the hypogastrium. Pulse strong, resisting, 88. Slight cough. No expectoration.

Abdominal organs.—No pain or tenderness of abdomen. Appetite good; not particularly thirsty. No nausea. Bowels open once a day. There is complete dullness in the hepatic region, as high as the sixth, and three inches inferiorly below the margin of the rib. The spleen does not seem enlarged. Makes water freely, without pain. It is of a dark high amber colour; sp. gr. 1029; very acid, with an excess of phosphates; no albumen. About 3xii. in twenty-four hours.

The tongue is somewhat furred, papillae rather prominent. No sore-throat, or difficulty of deglutition. There is, however, a slight cicatrix on the first arch of the palate. Left side more depressed and whiter than the surrounding mucous membrane.

Supposed exciting cause.—He had not got wet more often lately than before; so that he is not aware of any cause that

could have induced the present attack, which he imagines to be rheumatism.

Treatment.—R Pot. Iodidi, gr. iij.; Aque Ment. pip. ziss. ter die. *℞* Morphine Hydrochlor. gr. ss. o. n. s. Middle diet.

July 7th.—Sweated a little last night. Has had no pain for the last two nights. The eruption over the legs is much the same. Of those over the back of the neck many of the papule have gone on to suppuration, and are equally sore. He can bear to-day a considerable amount of pressure upon the nodes. There is no headache. Tongue rather white and dry. Appetite good.—Auge Pot. Iodidi, ad gr. iv. s. d.

9th.—The feet swell a little at night, but the nodes are much less painful or tender. There is no pain whatever in the node on the left thigh. The eruption on the legs is fading. He had some headache this morning and giddiness, so much so that in getting up he nearly fell down. Skin cool, not particularly moist. Pupils unnaturally dilated. Expression of countenance natural, the red maculae having disappeared. Appetite very good. Pulse 104 in the recumbent position, but quite soft. Bowels open once a day.—Auge Pot. Iodidi ad gr. v. s. d.

11th.—Did not sleep very well last night or the night before, but the morphia was accidentally omitted yesterday and the night before, but he sleeps a good deal during the day. There was no pain in the nodes, however. These are still a little tender on hard pressure, but much less than before. The scaly eruption on the legs is yellower than it has been. The eruption on the neck presents generally the same characters as before. Some have inflamed and become pustular. One in particular beneath the right axilla is very large and inflamed. Pulse 100, perfectly soft and compressible. Tongue clean. He has coughed a little more to-day than usual. Expectoration very trifling, purely mucous. Physical signs as before.—Resume the morphia.

12th.—The legs were more painful and swelled by a good deal when he went to bed last night, and this morning the left foot continues cedematous. The large sebaceous follicle noted yesterday has burst, and is suppurating freely. Pulse 104. Bowels not open.—Haust. Domest. Mane.

14th.—He does not perspire at night as before. He has been unable to sleep at night by reason of the noise made by a neighbouring patient. The legs were again a little painful last night, but much less than before. The nodes do not feel or appear smaller, and he states he believes they are not so; tongue clean; bowels open three times yesterday, not to-day. Pulse 92,

fuller than it was. Skin cool and moist. Right infraclavicular region is still duller than the left, and the respiration is weak in the former. Slight crackling heard at the end of inspiration and beginning of expiration.—*℞* Emplast. Lyttæ cuicque tibia, applicand.

16th.—There is a slightly red eruption, rather inclined to be scaly, not elevated, but rough to the feel, on the outer side of the left jaw, not before observed. The eruption in the neck bears precisely the same character as before. He states he feels much weaker, which he attributes to want of meat. He has been unable to sleep by reason of the pain of the blisters, which have risen well. Yesterday the whole leg was painful, streaked with red marks up to the knee. To-day this redness has disappeared. He complains of a disagreeable feeling of numbness, as of pins pricking him, over the anterior part of the left thigh. He also feels exceedingly drowsy. The blistered surfaces look very red, and are discharging freely. Pulse 82, soft.

18th.—There is a good deal of headache this morning, and he feels very weak. The blisters look very red and inflamed. There is, however, certainly less of the deep-seated pain than before. He is also better able to stand. The legs are not free from pain at night, though it is very trifling compared with what it has been. He took some house-medicine this morning, and the bowels have been freely opened since.—Lint and cold water to be applied to the blistered surfaces.

19th.—There is scarcely any improvement since last report. The pain continuing much the same. The blisters are, however, healing rapidly. The liver reaches as high as the 6th, but only one inch below the margin of the ribs.

21st.—The blisters are healing rapidly, and there is scarcely any more of the old pain remaining behind. Last night, however, the pain in the shins was more severe than it had been for some days, and all day yesterday his headache was very troublesome. The left thigh continues occasionally to be affected with the feeling of numbness before remarked. The nodes are distinctly smaller than they have been. Sleeps very well.—Auge Pot. Iodidi, gr. v. sing. dos.

22d.—The legs were less painful last night than they have been, although he walked down in the yard yesterday, and on his return in the ward felt very much fatigued, and the legs began again to swell; but this swelling soon disappeared.

23d.—He complains now of no pain, and he slept very well last night. He walked out yesterday evening for about an hour,

and returned much fatigued, and there was more pain, but it disappeared after a couple of hours. In other respects as before.

24th.—The colour of the skin is natural. There is no eruption on the legs as before, but there are a few faint scaly spots on the arm. Over the neck there are still observed the hard elevated papillae, with red inflamed base and oily-looking aspect, the apices of which are here and there terminated by black points; some are suppurating: they vary in size, the large ones being most painful. The nodes are still felt over the shin bones, but they are certainly smaller, and he can bear pressure upon them with but little inconvenience. He does not feel very strong on his legs, but he can walk very much better than he did. The legs are still a little cedematous at night. He sleeps very well. No tenderness across the loins.

The right side is still duller superiorly than the left on percussion. Respiration weak, both in front and behind, on this side, as compared with the left, and the expiration is proportionably too loud behind. There is some mucous rhonchus heard occasionally. In the other parts of the chest the respiration is healthy. Vocal vibrations equally felt on both sides.

Cardiac dulness reaches as high as the fourth rib; begins at the right border of the sternum transversely, extending about two inches and a half externally; apex felt beating behind the sixth rib. There is still a pulsation felt in the epigastrium. Liver reaches as high as between the fifth and sixth ribs, not more than one inch below the margin of the ribs. No tenderness on pressure over the region of the kidneys. Pulse 100, pretty full. Bowels open.

Discharged relieved.

State of Urine.

Date.	Reaction, &c.	Albumen.	Sp. gr.	Quantity passed in 24 hours.	Microscopical Characters.	Quantity of solid matter excreted in 24 hours.
July 4	Very dark; acid.	None.	1029	About 12	—	—
" 7	Do.	Do.	1011	32		387 gr.
" 8	Do.	Do.	1010-21	32	—	—
" 9	{ A.M. acid. P.M. alkaline.	Do.	1020	12	}	660
" 9		Do.	1017	20		
" 10	Scarcely acid.	Do.	1013	38		589
" 11	{ A.M. acid. P.M. acid.	Do.	1021	10	}	671
" 11		Do.	1019	20		
" 12	{ A.M. do. P.M. do.	Do.	1019	10	}	760
" 12		Do.	1015	32		
" 14	{ A.M. acid. P.M. very acid.	Do.	1020	32	}	808
" 14		Do.	1014	4		
" 16	Acid.	Do.	1020-11	22	Pentagonal crystals, organic globules (large), cystic oxide, casts of tubes, and hairs.	—
" 17	{ A.M. Do. P.M. Do.	Trace.	1025	10	}	347
" 18	Do.	None.	1024	2		
" 18	Do.	None.	1018	30		608
" 19	Very acid.	Trace.	1025	26	Minute crystals of oxalate of lime; a few of uric acid.	697
" 21	Acid.	None.	1017	46		889
" 22	{ A.M. do. P.M. do.	Do.	1024	12	}	1033
" 22		Do.	1025	24		
" 23	Do.	Do.	1012-20	32	—	—
" 24	Do.	Do.	1025	46	Large organic globules; crystals of oxalate of lime; four-sided crystals, tapering at both ends; lining of tubes; cystic oxide.	1048

On the 9th and 10th there was an excess of carbonate.

July 26th.—The patient called to-day at the hospital. He had been living freely, and had gained eight pounds in weight, since he left the hospital. He felt much stronger, but the pain in the nodes was more severe: they did, not, however, appear to be larger. The feeling of numbness over the left thigh persisted. Pulse 92, full; tongue clean; bowels regular.

[To be continued.]

KING'S COLLEGE HOSPITAL.

Disease of Knee-Joint.

ON Saturday, May 4th, Mr. Fergusson amputated the thigh in a case of disease of the knee-joint. The patient was a young man, about 20 years of age, and was first admitted into King's College Hospital in the summer of last year, suffering from disease of the tarsal and metatarsal bones. For the removal of this disease a portion of the foot was amputated by Mr. Fergusson, who performed Chopart's operation. The patient recovered from this, and an excellent stump was formed. At the time the operation was performed there was some swelling of the corresponding knee, and some pain was complained of in the joint; but it was looked upon as rheumatic, and not to be of a serious nature. After having left the hospital, however, the joint swelled more, and became stiffer, and it was evident that some serious disease was proceeding. The usual remedies were applied, but no benefit was derived from them. The joint increased in size, became very stiff, and all the characters of a diseased condition of the synovial membrane presented themselves. The sufferings of the patient, however, were not great, and the health continued to be good, and there would have been no necessity for any active interference at present, were it not for the circumstance that he was obliged to go to St. Petersburg, for the purpose of entering the service as an engineer. It now became a serious question as to whether it would be best to send him in his crippled condition, or whether it would not be more advisable to remove the limb previous to his going: he applied to the hospital a short time ago, and consulted Mr. Fergusson on this point. This gentleman stated to the patient that it was by no means a case in which amputation was absolutely necessary, and that it might in the course of time get well; but that it was doubtful, and that under the circumstances of his being obliged to go away, he would act according to his own wishes: the patient therefore determined to have the operation performed.

The operation was done just above the knee-joint, a short anterior flap being formed, and a very long one from the ham and the calf of the leg, so as to form an ample covering for the bone. A great many vessels, as is usual in this operation, required a ligature. On looking at the knee-joint, a very fair specimen of the pulpy degeneration of the synovial membrane showed itself: the cartilages, however, were sound, and there was no pus in the joint. This condition of the synovial membrane showed the necessity of amputation; although, as Mr. Fergusson stated, the symptoms of the case were not sufficiently bad for him to press an operation. It would probably be better if amputation was performed earlier in such cases; the operation is not generally resorted to until the disease has gone through its worst stages, and the patient has endured years of suffering to no purpose. Speaking of this disease, Brodie says, "In every case in which I have had it in my power to watch its progress, the complaint has advanced slowly, and sometimes has remained in an indolent state during a very long period, but, ultimately, has always terminated in the destruction of the joint."

On the same day Mr. Fergusson performed the operation of amputation at the ankle-joint. The patient was a little girl, about ten years of age, who had suffered for several years with disease of the tarsal bones. She had been in various hospitals, and no benefit having arisen from treatment, amputation had been proposed; but the mother would not consent to this measure. The disease still remaining, the health of the girl became seriously affected, and she was induced to send her to this hospital. On examination, the foot presented all the features of incurable disease, great swelling and thickness of the soft tissues, and sinuses leading to diseased bone. Although the patient was pale and emaciated, there did not appear to be any organic disease which prevented operation; consequently Mr. Fergusson determined to perform amputation at the ankle-joint.

The operation was performed in the following manner:—An incision was made from one malleolus to the other across the front of the joint; the knife was then carried around over the under surface of the heel, and the circular incision thus completed. The joint was then cut into in front, and the whole foot removed: the operation was completed in a few seconds.

We noticed that Mr. Fergusson made his posterior incision much more backwards than he has usually done; for instead of carrying the knife over the sole of the foot, he directed it over the posterior part—in fact, across the prominence of the

on calcis: by this means a posterior flap of much smaller dimensions than usual was made. The object of this was to prevent sloughing taking place afterwards. It will be remembered that this had occurred in two instances previously, in which the lower flaps had been made somewhat redundant. It is not unlikely that this had caused the sloughing. And Mr. Syme has pointed out, that by making a smaller flap this untoward circumstance might be avoided.

Everything went on well with this case; a rapid union of the wound took place, a most excellent stump has been formed, there was no tendency to sloughing, and the patient has considerably improved in health.

This operation of amputation of the foot at the ankle-joint has now been performed so many times, and with such successful results, that it must be deemed to be one of the most important improvements in operative surgery. The old operation of amputating in the lower third of the leg for disease of the bones of the foot, is in a great measure superseded by the ankle-joint operation. It has been found that sloughing of the posterior flap has not unfrequently occurred; it happened in the two last cases which were operated on by Mr. Fergusson, and this constitutes one objection to the operation; but if the precaution be taken to make the lower flap as short as possible, as was done in this instance, in all probability the chance of sloughing may be much less.

May 14th.—The patient who had his thigh amputated went on well for several days; the only peculiarity was, that the pulse continued to be more rapid than is usual. On the 11th, when the stump was dressed, it looked well altogether; but there appeared to be some want of action in it. At 2 A.M., on the 13th, as the nurse was arranging the dressings of the stump, it was found that hæmorrhage was going on. The house-surgeon was called, and discovered that a considerable quantity of blood had been lost; the patient had in the meantime fainted. Pressure by means of lint and cold water was applied, and the hæmorrhage ceased. It happened that at the same time bleeding had taken place at the nose; and the patient states that he has been in the habit of bleeding at the nose. He has ordered stimuli and opium; and a tourniquet was placed on the upper part of the thigh, and the patient was strictly watched. At 2 P.M. Mr. Fergusson saw him; he had rallied from the effects of the hæmorrhage somewhat, although he was blanched, and his pulse was small and rapid, running from 120 to 140 in the minute: no more hæmorrhage had oc-

curred. Mr. Fergusson removed the dressings, and found a considerable coagulum in the inner corner of the wound, which had opened up just over the situation of the main artery: the ligatures on the vessel, however, had remained quite firm. On sponging away the greater portion of this, the surface of the stump was found to be in a sloughy condition. A smaller and firmer portion of coagulum, appearing to be strongly attached to the vessel, and preventing further hæmorrhage, was not removed. As there was no necessity for any active interference, cold-water dressing was applied, the tourniquet was ordered to be kept on, and opium ordered in repeated doses to tranquillize the system. On the middle of the 14th he was much better; there was no more hæmorrhage, and, although the patient was still low, he had considerably recovered from the shock of the hæmorrhage: the tourniquet was still kept on the thigh, for fear of hæmorrhage recurring again. The stump was dressed with lint and cold water, and the patient was ordered plenty of stimuli and nourishment.

From this time the case went on very well,—no more bleeding occurred, and the ligature separated from the stump on the 18th; the stump looked healthy, and there was no more tendency to slough, and everything has gone on well since.

Amputation of a limb for disease of the knee-joint is generally postponed until all other measures have been previously tried, and the joint has become so disorganised that no hope of recovery under any circumstances can be expected. The surgeon seldom feels himself justified in cutting off the limb until the symptoms are such as to leave no doubt of the cartilages of the joints being ulcerated, or of actual caries of the bones; and even then, the last measure is not resorted to hastily, but other measures are used to stave off the mutilating process. Generally months, and even years, are spent in this manner, the patient undergoing severe treatment, and languishing under hectic fever. After all, in most cases he is obliged to undergo the operation; and when the diseased part is cut open, it is generally found that there is such an amount of disease present, that it must have been utterly hopeless to have expected a cure.

Under these circumstances, then, it becomes a somewhat important question, as to whether the surgeon ought not to perform amputation at an earlier period, when he is assured, from the nature of the symptoms, that the disease is of such a nature as will ultimately lead to destruction of the joint. Experience has told us that "pulpy degeneration of the synovial membrane" is an affection

which generally ends in incurable disease. In the case operated on by Mr. Fergusson, this disease was present in its most marked character; and although the symptoms were by no means sufficiently severe to have induced him to amputate the leg, yet he was induced to do so under the peculiar circumstances of the patient. Is it not probable that much useless pain and loss of time has been saved to this patient? for this case would almost infallibly have terminated as others of a like nature.

The circumstance of the secondary hæmorrhage was curious; although the bleeding was very profuse, it was not considered to have come from the main artery. Mr. Fergusson thought that some small vessel must have given way, when the inner angle of the wound was suddenly opened up by the breaking of one of the stitches.

Correspondence.

DR. WIGAN ON MEDICAL REFORM.

SIR,—The accompanying letter, which appeared in the *Morning Chronicle* of Monday, the 17th of February, 1845, under the signature of "Senex," is from the pen of the late Dr. A. S. Wigan. Great part of it seems as applicable as when written. The "hubbub" continues: the writer has, indeed, passed away; but the actors, with but few exceptions, are still on the stage. The general correctness of his judgment, and the clearness and originality of his views, entitle any remarks of his on the subjects agitating the professional mind to the favourable consideration of his contemporaries.

The lately published letter of the Council of the College of Surgeons has recalled public attention to some of the better parts of Sir James Graham's almost forgotten attempts at legislation; and you may perhaps think Dr. Wigan's observations on that bill worthy of being rescued from the oblivion which seems of necessity incidental to the columns of a daily newspaper.

D. R.

May, 1850.

MEDICAL REFORM.

To the Editor of the *Morning Chronicle*.

SIR,—The reasons assigned by medical agitators for the present disgraceful hubbub, are so absurdly inadequate to explain it, and to justify the measures they propose, that it is necessary to examine the affair more deeply, if we would form a correct opinion of the unexampled disturbance. I feel sufficient interest in the respectability of a class in which I have many personal

friends, to suffer a deep sense of humiliation at the exposure which is now taking place,—an exposure exhibiting the general practitioner in a light which must seriously deteriorate his position in society, and injure his pecuniary interests.

We certainly see many respectable names in the list of pugnacious opponents of the new medical bill, but we also see numbers of a very different description, many of them manifesting so lamentable a want of common education (speakers and writers), that, if a fair sample of the class, its reform would imperatively require a bill vastly more severe and stringent than that which has excited so much indecent opposition. The two classes cannot possibly have any avowed object in common, and the motives of the few educated men amongst them cannot surely accord with the wishes of those whose abuse is so lavishly bestowed on the imagined authors and promoters of Sir James Graham's measure, so long and so urgently solicited by all the respectable members of the profession.

Had the bill been brought forward at the end of the session, with the avowed determination to resist all modification of its enactments, and to pass it without allowing time to ascertain the deliberate opinion of the whole body of the profession, it might very reasonably have given rise to suspicion that it would not bear a full examination, and that it had some latent object to which delay and discussion would be fatal. This might have justified active opposition, but not scurrilous abuse; but thrown out, as it was, in the fairest and most candid manner, to be well weighed and sifted during a recess of six months, without the slightest intimation of a wish to carry it till it should receive the deliberate approbation of those who were affected by its provisions, the mode in which it has been received is most disgraceful. I think there is not a surgeon-apothecary in the kingdom who, on a similar reception of similar efforts of his own to benefit his profession, but would have thrown up his plan in utter disgust.

The impression made by all this noise and violence on the minds of that influential class who are to decide on the measure (the minds of Members of Parliament and their connections) is so unfavourable, that whenever the subject is again brought forward, it will, I fear, seriously impede the reception of arguments which, had the opposition to the bill been decent and gentlemanly, might have had great weight, and materially influenced their decision. The general suspicion among members is, that the assigned causes of discontent are not the real motives of all this froth and fury, and that the latent object is to pro-

cure for the general practitioner an entire monopoly of the profession, and to combine for his sole advantage the profits of the chemist and druggist, the apothecary, the surgeon, the physician, and the quack,—a monopoly which, it is quite certain, the Legislature will never concede.

I have no means of knowing what part of the dreaded bill (if any) is strictly due to Sir J. Graham; but a minister placed in his position would strangely neglect his duty, did he not advise with the highest and most eminent in the profession. I presume, therefore, that he would naturally first address himself to the Colleges of Physicians and Surgeons, as most competent, and that the leading men in those departments were bound to state to him their opinions freely and candidly, without reference to the temporary interests or advantage of any single class—the object being the benefit of the whole nation—unless, indeed, he addressed himself to “the old hags of Rhubarb Hall,” so long and so perseveringly vilified as “despicable and ignorant sticklers for a disgraceful monopoly.” I know not where else he was to go for information and advice.

Whether he did apply to the last named parties (who are now all at once discovered to be a most enlightened and patriotic set of real gentlemen), I know not: if not, he is to be pitied and excused for allowing himself to be influenced by the eloquent denunciations of the medical journals. How could he possibly know that the abuse so lavishly showered upon them was utterly unfounded?

For myself I cannot assent to either of the characters bestowed on the Society of Apothecaries. I believe them to be very respectable and conscientious men, who have all along endeavoured to do their duty fairly and impartially in the incongruous and false position in which they have been placed by the legislature, a position for which they were unfitted by their education and pursuits. They have erred, as it seems to me, in exacting too much, instead of too little, from the students sent up for examination. Their curriculum was well adapted to make competent physicians, had the previous education of the aspirants been such as to profit by it. The extent and variety of the sciences in which they were required to be perfected, were such as it was absolutely impossible to acquire in the period assigned, if the previous five years had been passed in the mechanical labours of an apprentice, with the general education thus suspended during exactly those years of youth when it can be pursued to the greatest advantage. With few exceptions, the students trusted to the grinder to furnish them with answers to all probable

questions, and the examiners were themselves too slightly imbued with science to do more than put the young men through their paces in the “*formules d’usage*.” They did the best in their power, and they were rewarded with insult and abuse.

The proceedings and motives of the College of Surgeons are so clearly and fairly stated in your paper of Tuesday last, as to carry conviction to the mind of every reader not biassed by self-interest or soured by disappointed vanity. It is quite clear that in making a selection of names for the first 300 Fellows, it was impossible to avoid all partiality, or to satisfy those who were excluded; but whenever the facts of the case shall be temperately discussed by unprejudiced members of parliament, I think it will appear that the Council of the College of Surgeons executed the ungracious task imposed on them by their charter in a fair and candid spirit.

If all the members of the College were fit to be at once elected Fellows, what has been the object of the long agitation for Medical Reform? Nothing more was required than to change the designation; but what would have been the honour of the new title, if the Fellowship implied no superiority? I think it was Cardinal Richelieu who, when reproached with an extravagant creation of Peers, replied, “Sir, if I please, I will make so many that it shall be a disgrace to be a Peer, and a disgrace not to be a Peer.” Thus would it have been with our profession; for certainly no one could have prided himself in a title shared by men whose communications to the journals imply such a total want of education that one may be almost certain the printer corrected the spelling.

Whatever be the purity of motive of some of the medical agitators (and there are among them men with well-founded claims to honour), it is clear that the larger portion think only of preserving what many, from their violent language, will be inclined to call an odious monopoly, which they suppose to be endangered by the bill of Sir James Graham. I believe, however, that they are entirely in error, and that the epidemic alarm which excites the wonder and ridicule of the public is entirely factitious, and that those who have for their own purposes worked up the unseemly display of rancour, have entirely overshot their mark. The bill will have no influence on the position and prospects of any man already established. No one will gain a patient by the addition of the title of “Fellow,” nor lose one for the want of it. Such of them as keep retail drug-shops (many of whom profess to be indignant at the toleration of quack medicines, while their own windows are full of them), may

rest satisfied that they will still be called in on emergencies by those who cannot afford to give fees; and such men as have established a practice for themselves, or purchased one from a predecessor, will still continue to attend the same patients, from habit or personal preference, as long as they give satisfaction, and even a little longer; for no one changes his family attendant but reluctantly and from weighty reasons; but patients will neither swallow more draughts, nor submit to higher charges than before, merely because he is dubbed a "Fellow."

The only mode in which the new bill, if passed into a law, can affect the pecuniary interests of the lower class of the profession, is in the abolition of apprenticeships; and certainly the premium paid by a youth for liberty to give five of the best years of his life to his master's service was a very important item in the list of emoluments of a professional man. I firmly believe that this is the clause which has excited the strongest feeling of opposition, although the men who profess to be so patriotically anxious that the public should be supplied with sound medical advice, do not think proper to place it in the front rank. Yet it is a much more legitimate ground of dissatisfaction than many that are usually assigned. Every man entered the profession in the full confidence that it would be a permanent source of income, and feels as justly disappointed as the innkeeper, who, having invested his whole fortune in a posting-house, finds himself suddenly reduced to beggary by a railroad. If any scheme of compensation can be devised, it ought to be brought forward when the bill comes on for discussion in Committee;—but no compensation has been given to innkeepers.

The *British and Foreign Medical Reviewer* has pointed out some of the consequences of removing all restrictions from unlicensed practitioners, which seem not to have occurred to the framers of the bill. He has shown that the source and nature of the opposition which the regular practitioner would encounter will not arise from a race of entirely uneducated quacks, but from the idle, dissipated, and ignorant young men who have obtained a smattering of knowledge in the medical schools, but have neither energy, time, nor means to go through a regular education, and subject themselves to the test of an examination. This is a real and reasonable objection to the clause, which will necessarily be removed when its effect is explained in Committee, unless the members should draw the not unnatural conclusion that the previous indecent violence on the subject, in speeches and journals, with which the whole bill has been assailed, renders every

suggestion of the assailants suspicious, and their testimony utterly worthless.

Let us suppose that a large proportion of attorneys were in the habit of keeping stationers' shops, and that, indeed, the business of law-stationer was the usual stepping-stone to practice; and, also, that the highly respectable upper class of legal practitioners, who now enjoy the confidence of the public,—who are entrusted with the character and fortunes of the higher and middle classes,—who gave a guarantee for good behaviour by investing a considerable sum of money in the purchase of a practice,—to whom reputation is fortune, and the loss of it destruction: let us suppose these two very different sets of individuals to join in a common object—abusing and opposing by all means, fair or foul, a Government Bill, of which the professed object was to elevate their position in society, by electing, from time to time, from among them those who could show, by a fair examination, that they were qualified for the duties of a barrister,—that instead of receiving such a concession as a boon, they were to express themselves insulted and outraged, because their whole body, law-stationers and all, were not at once, and without the "stigma" of examination, constituted barristers, and placed on a par with men who had been patiently occupied in study twenty years, without emolument, waiting for the chance of employment, and that these unreasonable claimants demanded, along with their new honours, the right to keep shops, and sell paper and pens, sealing-wax, wafers, and parchment.

Let us suppose such men calling public meetings, and using the most violent and indecent language, declaring that they alone were the lawyers, for they knew every department, whilst barristers only practised in one; that such men as Eldon, Stowell, and Romilly, were *well enough in their way*, but were quite ignorant how to conduct a *qui tam* action,—that they could not even tell the weight of a ream of paper without putting it into the scale, and knew nothing at all of the mysteries of hot-pressed and wire-wove, spurning the term "subordinate," and demanding that no mere stationer should be allowed to answer a customer who asked the amount of a stamp required, although any attorney keeping a shop was at liberty to wheedle a casual purchaser into a lawsuit. Would the world at large,—would a Committee of the House of Lords or Commons, give them credit for perfectly pure motives, and that their object was not rather to pull down the barrister to their own level than raise themselves to his? I much doubt whether the loudest professions of pe-

triotism, and of a *wish to provide the public with sound lawyers*, would remove the objections to such an alliance of men with opposing interests in a common object.

There can be no question that the whole amount of public patronage bestowed on the general practitioner has wofully diminished within the last twenty years, and this in spite of his great superiority over the mere physician or surgeon,—a superiority invariably claimed by one party, *never disputed* by the other. I believe that such men as Chambers, Holland, and Brodie, would make miserable apothecaries; and, were any one of the three to open shop in Whitechapel, he would have no chance of success against his universally informed competitors. Such men are well enough in *their way*, but they must not presume to compare themselves with those who know all and everything; to which, indeed, I never knew them to make pretensions.

The diminution of medical practice among the class which we must not venture to call *subordinate*, arises, then, not from the greater number of competitors for employment; for they have scarcely increased in proportion to the augmented population, or to the increase of other professions. The diminution is easily and distinctly traceable to two causes: 1. The general diffusion of the doctrines of homœopathy has let the world into the secret that an immense majority of ailments, for which it has been the custom to resort to drugs, are merely remedial processes set up by nature, and that abstinence and exercise will enable the patient to wait for the spontaneous cure, which is sure to arrive if not interfered with. The cunning old fox, Hahnemann, like the inventor of the wonderful mode of curing incised wounds by anointing the cutting instrument instead of the sore, was not such an ass as to believe that his little comfits had any real influence on disease; but he knew that men would not wait unless the imagination was acted on; so he called his corporeal pills by the names of powerful drugs, and manufactured a theory to suit, which forms perhaps the most transparently absurd and ludicrous of all the modes by which impudence has emptied the purse of folly. Patients *will not* swallow medicine as formerly: the days of draughts are gone, and will not return for a century. 2. But the most effectual damager of the medical practitioner is the spread of medical journals, through the publicity given to all the details which can excite prurient curiosity. The addition to the stock of knowledge of the profession is infinitely small for they teach a man to be
ful of everything

but such works render the public suspicious and unreasonable, and enable every one to quack himself. He may well lose all confidence in physic when he reads opinions diametrically opposite on every possible topic of medicine, surgery, and midwifery. He does not know that the great majority of contributors to these publications are men of the scantiest acquirements and experience, who dispute about things long settled in the minds of educated practitioners. He imagines that all are like the noisy and vulgar disputants who are trying to blacken each other's reputation. A medical journal is, like the *lion's mouth* at Venice, a receptacle for all the bile and venom of men who cannot obtain success because they are too indolent to deserve it, but who can wreak an ignoble vengeance on the eminent for passing them in the race; and thus the public, who are invited to see the fray, lose faith in all of them.*

To conclude, the Bill has obviously been framed with great care; and the most sagacious opponents (stimulated by an intense feeling of self-interest) have been able to discover but two defects—namely, the want of restriction on unlicensed practitioners, and the exclusion of general practitioners from the Council of Health. Both these defects, if on calm consideration and discussion they are found to be valid objections to the scheme, are easily remedied, without affecting the Bill or impairing the efficiency of its many admirable provisions.

The profession is either to be raised in public estimation and positive utility by well-considered means like the present, or it is to be left in its present anomalous and disgraceful state. The establishment of a College of Surgeon-Apothecaries is alone wanting to bring medical reform into utter contempt.

SENEX.

PREPARATIONS OF AQUA CHLORINII.

SIR,—Since you kindly inserted my letter on the use of chlorine in diarrhoea and cholera, I have been written to from the country respecting the mode of preparing the remedy. Perhaps you can find a corner to state that a simple solution of the gas in water is the form which I have found most to be depended on. When prepared according to the formula of the Dublin Pharmacopœia, it almost always contains hydrochloric acid, which is a decided objection.—I am, sir,

Yours faithfully,

C. W. MANN.

3, Myddleton Square,
June 1, 1850.

* We think the writer should have been a little more precise, and pointed out the Journal or Journals to which he intended to apply this censure.—ED. GAZ.

PROCEEDINGS AT THE MEDICAL AND CHIRURGICAL SOCIETY. VINDICATION OF TREATMENT PURSUED BY DR. P. SMITH.

SIR,—I was present as a visitor last night at the Medical and Surgical Society, when Dr. Robert Lee's paper on the use of the Speculum was read. In a supplemental paper he related the case of a Mrs. S., in which he denounced Dr. Protheroe Smith as having misused the uterine sound by thrusting it into the middle of a fibrous tumor, thereby causing inflammation and suppuration in its substance, severe irritative fever, and, by implication, hastening the death of the patient. Feeling assured that the object of Dr. Lee was the investigation of truth in the results obtained by the use of instruments in the diagnosis and treatment of uterine disease, and knowing how painful it must have been to a sensitive and honourable mind to feel called upon by an imperative sense of duty thus to denounce a brother physician, I should have presumed at once to have set him right as to some of the particulars having a most material bearing upon the case, had I not understood that, as a visitor, I was debarred from making any observations. It happens, sir, that both Mr. Moon, of Tottenham, and myself, were present each time when Dr. Smith saw the patient aluded to, both at the Hospital for Women, and at her private residence.

The case was *never examined with the speculum*, or "*the thing called a sound*." She suffered, from the first, considerable pain on digital examination, excessive flatulency, and irritative fever, and her health was entirely broken down. From her symptoms a suspicion arose that abscess might coexist with the fibrous tumor, and, as she seemed to be fast sinking, Dr. Smith deemed it advisable to pass a *fine exploratory needle*, *not a sound*, into the tumor, with the hope that, if such existed, her distressing symptoms might possibly be relieved, at least for a time. This was done at her own residence, as she was too ill to attend at the hospital, and on the withdrawal of the needle it had in its groove what appeared to be thick pus. The post-mortem examination, upon Dr. Lee's own showing, proved the correctness of Dr. Protheroe Smith's diagnosis. It will thus be seen, that the symptoms which Dr. Lee asserted had resulted from the operation, in fact preceded it, and were really the cause of its adoption. I have no doubt, sir, that Dr. Robt. Lee will rejoice to find that such a serious charge against a professional brother entirely fails, from the inaccuracy of the data upon which it was founded, and that he will be glad to feel himself relieved from the unpleasant feeling which a belief in the possible truth-

fulness of such a charge must have created.—Your obedient servant,

JOHN SCOTT.

High Street, Camden Town,
May 29, 1850.

A REMARKABLE CASE OF DOUBLE PREGNANCY — ONE OVUM ENTERING THE UTERUS, THE OTHER BEING ARRESTED IN THE TUBE. BY WM. CRAGHEAD, M.D.

DR. CRAGHEAD, who reports this case, says—I was called, on the 9th of April last, to visit a negro woman, belonging to Mr. James Conway, of this neighbourhood. She was thirty-five years of age, of strong constitution, and had previously enjoyed excellent health. She had one child at an early age; lived without a husband till she was near thirty, when she married, and shortly afterwards gave birth to her second child. Again she became "*sine marito*," in which state she remained until last Christmas. Having menstruated early in January 1849, and not since, she supposed herself pregnant. About the first of April, she complained of pains resembling those of colic, in consequence of which, her master bled her, gave her an aperient, and occasionally a dose of laudanum to prevent abortion.

I found her somewhat under the influence of laudanum, but feverish, and still complaining of considerable abdominal pain and soreness: upon examination, I discovered a tumor in the left iliac region, pressure upon which gave acute pain. This I pronounced at the time to be ovarian. I bled her, and gave calomel and opium, to be followed by oil and turpentine; directed an antidysentery liniment to be frequently applied during the continuance of pain and soreness; and prescribed laudanum to prevent all uterine effort, and a mixture of spirits of nitre and balsam to relieve some symptoms of dysury.

On the 12th I visited her again. She was every way more comfortable, with but little fever or soreness, and had no dysury. I directed her to keep still, and to use aperients and laudanum, as either might be indicated.

On the 17th she felt so much relieved, that she spoke of walking out. As her bowels were constipated, she took a dose of mild cathartic pills at bed-time. Before day she complained heavily, not, however, as if in labour; but said "*she felt as if there was something in her which ought to come away*," and made several ineffectual efforts to evacuate the bowels.

On the morning of the 18th, I was hastily summoned to visit her, and told that she was *in extremis*. I found her in a collapsed state, with extremities cool, and pulse scarcely, if at all, perceptible, sighing,

tossing about, and complaining of a most distressing sensation in the lower part of the abdomen, which was now so greatly distended that I could not define the position of the tumor, which I had before noticed in the region of the left ovary. Her general appearance very much reminded me of the case of a lady, attended a few months before by Dr. Green and myself, who died of hemorrhage from an ovarian tumor. In the present case, in addition to the symptoms dependent upon internal hemorrhage, there were those of colic, and a constant, though vain, desire to evacuate the contents of the bowels and bladder. Opium, internal stimulants, and counter-irritants to the extremities, were perseveringly used. The catheter was introduced, and the bladder emptied, affording a slight temporary alleviation of suffering. Her bowels were so constipated, that, notwithstanding the liberal use of calomel and croton oil, terebinthinate and other enemata, during the three succeeding days that she lived, they were never evacuated. Her system, however, reacted about night. The next day she was feverish, with considerable irritation of the stomach. Labour pains set in on the evening of the 19th, and in a short time she aborted without any diminution of the abdominal distension. The fœtus was well formed, and of rather more than three months' development. She lived till the evening of the 21st, when she died rather suddenly; having presented the combined symptoms of obstruction of the bowels and loss of blood.

April 22d.—My partner, Dr. John J. Burton, assisted me in making a post-mortem examination. Upon opening the body, the whole abdominal cavity was found filled, anteriorly, with coagulated blood, and posteriorly with serum, which had proceeded from the rupture of some of the vessels of the left Fallopian tube, now greatly enlarged, and converted into a membranous sac, containing a fœtus of the same size as the one delivered *per vias naturales*. The sac was removed entire; and, intending to send the parts to you, the tubal fœtus was preserved in its own liquor amnii three months, when, seeing no opportunity of forwarding it, the tube was opened in the presence of Drs. Atkinson, Green, Hoge, and Roan. The colon was enormously distended with air, and in a state approaching gangrene. Whether the colic was primary, and hastened the "unavoidable hemorrhage," or whether the obstruction of the colon was secondary, and dependent upon the pressure of the tumor, and the great quantity of coagula, I cannot say; for we were so much interested by the discovery of the fœtus, which, at this stage of the examination, was seen through the transparent membrane in the

tube, that the investigation in regard to the diseased condition of the bowel was prosecuted no farther; and we gave ourselves up to reflection and speculation on this wonderful departure from the ordinary laws of nature.

Dr. Neill gives the following account of his examination of the parts:—

The abnormal cavity is undoubtedly a dilatation of the Fallopian tube of the left side. I have exposed and traced the tube from the uterus to its infundibuliform expansion into the walls of the cavity. I can find nothing like a continuation of the tube from the external side of the sac, nothing that can positively be considered as its fimbriated extremity.

The distance between the uterus and the uterine side of the tubal cavity or sac, measured along the uncoiled and dissected Fallopian tube, is two and a half inches.

The cavity itself is five and a half inches long, and three and a half inches wide, though it is much diminished and contracted from having been preserved in alcohol. A more correct idea of its size would be given by referring to its contents. It contained a well-formed fœtus, five and a half inches in length, with a cord and a well-developed placenta attached. The ovary was readily dissected from the external surface of the sac, and its true fibrous structure recognised. It is not much diminished in size, nor is there any alteration in its colour; but its position is somewhat altered from the development of this new cavity. The ligament is much increased in size, and very fibrous in its appearance.

The uterus now measures six and a half inches in length, and three inches in its greatest breadth, and contains a dark-coloured mass, which is probably a placenta. The fœtus from this cavity measures but five inches. The fallopian tube of the right side deviates from the usual appearance. It is very much dilated in its entire length, and its walls are much softer and less fibrous than in the natural condition of the tube.—*Dr. Craghead, in American Journal of Med. Sciences.*

LONDON HOSPITAL.

ON Wednesday last a general court of the governors and subscribers to this institution was held in the board-room of the hospital, Mr. J. S. Smith in the chair. The minutes of previous meetings having been read, the secretary read the report of the state of the hospital, which was in a generally thriving condition. The number of in-patients who have been discharged during the last quarter is 959, of whom 497 were cured, 402 much relieved and benefited, and 60 died. The number of in-patients now in the institution is 306; out-patients

on the books, 1867. The annual report for the past year spoke of the institution and its prospects in a most encouraging manner: 4090 in-patients were admitted during 1849, of whom 3783 were discharged cured, 298 died, and 321 remained in the hospital. The out-patients for the same period amounted to 16,816, making a total of 925,616 patients who have received the benefits of this charity since its foundation, of which number nearly one-half were cases of accidents admitted without any recommendation. The extension of the east wing is now completed, but a considerable addition would have to be made to the income of the hospital before the committee could extend its benefits, as, in consequence of the limited means of the institution, they had been compelled to reject 210 applications certified as proper cases for admission. This report was received and adopted, and, some ordinary routine business having been transacted, the meeting separated after a vote of thanks to the chairman.

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 31st ultimo:—A. Fleming, J. Berry, C. Johnson, H. W. Bromley, A. Seatliff, J. Strate, G. H. Kirkpatrick, R. S. Thomas.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, the 30th of May:—Thomas Coke Higgs, St. George's, Bermuda—Charles Joseph Bullock, Congleton—Henry Allen Aldred, Blackfriars Road.

OBITUARY.

On the 9th of April, at Umballah, in the East Indies, on his march with troops to Lahore, William Veal, Esq., Assistant-Surgeon, H.E.I.C.S., son of James Veal, of Abingdon Street, Westminster, solicitor.

On the 27th ult., Charles Wellington Kent, Esq., second surviving son of the late Rev. George D. Kent, Lincoln, formerly surgeon to the Surrey Dispensary, aged 35, deeply regretted by all who knew him.

BOOKS & PERIODICALS RECEIVED DURING THE LAST TWO WEEKS.

Physico-Physiological Researches; or, the Dynamics of Magnetism, Electricity, &c. By Baron von Reichenbach. From the German second edition, by John Ashburner, M.D. London, Baillière.

Is the Practice of Medicine in 1850 a degenerate Pursuit? By a Practitioner. 2d edition. 1850.

Instinct and Reason deduced from Electro-Biology. By Alfred Smees.

The Sumbul. By A. B. Granville, M.D. F.R.S. &c.

The Symptomatic Treatment of Asiatic Cholera. By Ewing Whittle, M.D. Lond., M.R.C.S. &c.

El Observador Periodico de Ciencias Medicas y Naturales. Barcelona, 10 de Mayo, 1850.

Comptes Rendus. Nos. 19 and 20. 13 and 20 May.

The British American Journal. May 1850.

The London Journal of Medicine. June.

Monthly Journal of Medical Science. June 1850.

Pharmaceutical Journal. June 1850.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, June 1.

BIRTHS.		DEATHS.	
Males....	677	Males....	243
Females..	697	Females..	393
1874		736	

CAUSES OF DEATH.

ALL CAUSES	736
SPECIFIED CAUSES	736
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	130
Sporadic Diseases, viz.—	
1. Dropsy, Cancer, &c.	43
2. Brain, Spinal Marrow, Nerves, and Senses	115
4. Heart and Bloodvessels	34
5. Lungs and organs of Respiration	105
6. Stomach, Liver, &c.	47
7. Diseases of the Kidneys, &c.	11
8. Childbirth, Diseases of Uterus, &c.	3
9. Rheumatism, Diseases of Bones, Joints, &c.	7
10. Skin	3
11. Old Age	24
12. Sudden Deaths	6
13. Violence, Privation, Cold, &c....	11

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox	6	Convulsions	30
Measles	12	Bronchitis	44
Scarlatina	17	Pneumonia	42
Whooping-cough	28	Phthisis	103
Diarrhoea	15	Lungs	8
Cholera	0	Teething	9
Typhus	26	Stomach	1
Dropsy	13	Liver	9
Hydrocephalus	31	Childbirth	3
Apoplexy	24	Uterus	0
Paralysis	20		

REMARKS.—The total number of deaths was 123 below the average mortality of the twenty-second week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer	29.89
Thermometer	58.3
Self-registering do. b.	Max. 101° Min. 35°
From 12 observations daily.	Sum.

RAIN, in inches, 0.36.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was about the mean of the month.

NOTICES TO CORRESPONDENTS.

The case of Homicidal Wound in the abdomen will be inserted. We are quite unable to decipher the name of the correspondent who has kindly sent it to us.

We are still compelled to postpone many papers which are in type.

The letter concerning the "celebrated" Dr. Guggenbühl is under consideration.

RECEIVED.—Mr. W. Sweeting.

Lectures.

LECTURES

ON INFLAMMATION,

(Delivered in the Theatre of the Royal College of Surgeons of England).

BY JAMES PAGET,

Professor of Anatomy and Surgery to the College.

LECTURE II.

General effects of inflammation—Cessation of the process; deliquescence and metastasis; recovery of the normal circulation of the blood—Productive effects of inflammation; the several effusions or exudations attending the process—

1. Serous exudation—its rarity—usual existence of fibrine or corpuscles in the supposed serous effusions; 2. Effusions of blood—secondary and primary hæmorrhages in inflamed parts—blood-stained effusions; 3. Exudations of lymph—General characters of inflammatory lymph—its fibrinous and corpuscular varieties—primordial forms of the various exudation-corpuscles—mixed lymph.—Comparison of the varieties of lymph with the varieties of materials effused for the repair of injuries.—Conditions determining the fibrinous or corpuscular character of the inflammatory product, and the primary tendency of the inflammation to be adhesive or suppurative—respective influences of the state of the blood, the seat of the inflammation, and its degree and general character; 4. Exudations of mucus—their various characters, and the transformations of the mucus-corpuscles.

THE state described in the last lecture may, without further change, cease and pass by, and leave the part apparently just as it was before the inflammation. And there are two chief modes in which this may happen—namely, by simple cessation of the inflammation, or by deliquescence, as it has been called, and by metastasis, in which, while the inflammation disappears from one part, it appears in another. So far as the inflamed part itself is concerned, I believe the changes are, in both these cases, the same, and consist in a more or less speedy return to the normal method of circulation, and the normal apparent condition of the blood, and of the nerves, the tissue itself presenting no change of structure.

I do not know that any description of the process of recovery from the inflam-

matory state would tell more than is implied by calling it a gradual return to the natural state,—a gradual retracing of the steps by which the natural actions had been departed from. As it has been watched by many in the frog's web, and by myself in the bat's wing, the vessels that were filled with quick-flowing blood become narrower, the streams in them also becoming slower, and less gorged with red blood-corpuscles, till the natural state is restored. The pulsating or slower streams are equalized with those about them, and gradually making their way into the stagnant columns, drive them on or disperse them. In the frog, clusters of blood-corpuscles have been seen to become detached, by a stream breaking-off portions of the stagnant blood, and then to float into the current, where, gradually, the several corpuscles disperse. So, too, in the frog and tadpole, after injury, I have seen fragments of fibrine, washed from the blood that had clotted in the vessels of the injured part, floating in some distant vessels; but I have seen no such changes in the warm-blooded animals.

It may be difficult to explain this recovery in the case of complicated inflammations. When a slight mechanical stimulus has been applied, and the vessels, after contracting, have dilated, we may see some signs of weakened muscular power, in the fact that the same stimulus will not make them contract again; and then their gradual recovery may be the consequence of their regaining their weakened and exhausted power, just as a wearied muscle does when left at rest. This must always be one element in the recovery of the natural state by a part that has been inflamed; indeed, it is probably that part of recovery which is most slowly achieved. Still, it is, probably, only one element in the process of recovery. In an inflammation in which all the conditions of nutrition are at fault, each must recover its normal state; but, of the manner in which they severally do so, we have no other knowledge than is implied in the general truth, that all living things, after being disturbed from their normal mode of action, tend to recover it as soon as the disturbing force is withdrawn. The order in which the several disturbed conditions of nutrition will be restored is scarcely less uncertain: probably it is not constant, but may depend, in great measure, on the order in which they were involved in error. But we have no clear facts in this matter; only, we may observe, that in many cases, if we correct the error of one of the conditions of nutrition, the rest will be more apt to correct themselves. Thus, of the remedies for inflammation, few can act

upon more than one of the conditions on which it depends; yet they may be remedies for the whole disease; for, as it were, by abstracting one of its elements, they destroy the consistence and mutual tenure of the rest.

The process of deliquescence, or the mere cessation of the disease, may be regarded as the most perfect cure of which inflammation admits. It is in many cases an unalloyed advantage; but in some it is not so, though the local change may be the same; for materials accumulated in the stagnant blood of the inflamed part, or absorbed from its morbidly altered tissues, may, when the inflammation subsides, pass into the general current of the blood and infect its whole mass, or disturb the nutrition of an organ more important than that which they have left. Such are the events in the metastasis of gout, and the premature subsidence of cutaneous eruptions.

To pass now to the effects of inflammation—to the events to which the inflammatory condition may lead when it does not subside in the manner just described. They are very numerous; but they may be divided into two chief classes:—the *productive* and the *destructive* effects of inflammation. The description of the former will include the histories of the several effusions or exudations from the blood-vessels into the inflamed part, their developments, degenerations, and other changes. In the account of the destructive effects may be comprised that of the various effects of nutrition, the degeneration, absorption, ulceration, and death, to which the proper elements of the inflamed part, and, with them, the products of the inflammation, are liable.

I proceed, then, to these histories; and first, of the *products of inflammation or inflammatory exudations*.

The materials that may be effused from the blood-vessels of inflamed parts are chiefly these—serum; blood; lymph, or inflammatory exudation, especially so-called; and mucus; or, rather, these last two are primary forms from which, by development or degeneration, many others may be derived.

I. *The effusion of serum*, except as the result of the lowest degrees of inflammation, or as a diluent of other products, is probably a rare event. That which is usually regarded as a serous effusion in inflammation, is, in many cases, a fluid that contains fibrine, and resembles the *liquor sanguinis* rather than mere serum. It is this kind of effusion on which Vogel*

has fully written, under the designation of *Hydrops fibrinosus*. A good example of it may be seen in the fluid contained in blisters, raised by the action of cantharides or heat applied to healthy persons. And another form of liquid effusion differs from serum, in that, though it does not coagulate, it contains a material capable of organisation into cells: such is the fluid that fills the early vesicles of herpes, eczema, and some other cutaneous diseases.

The fluid that contains fibrine, and is most generally described as a serous effusion, may have the ordinary aspect of serum; more rarely it is colourless or opalescent, like the liquid part of the blood which one sees collecting for the formation of a buffy coat. The fibrine that it contains may remain in solution, or without coagulation, for an indefinite time within the body, but will coagulate readily when withdrawn. For example, the so-called serous effusion, which is abundant in the integuments near the seat of an acute inflammation in deeper parts, and which flows out like a thin yellowish serum after death, will soon form a soft jelly-like clot, that is made succulent with the serum soaked in it. The fibrine appears tough, opaque-white, and stringy, when the fluid is expressed from it, and shows all the recognised characters of the fibrine of the blood. Thus, to mention but one case which was remarkable for the delay of the coagulation: a man received a compound fracture of the leg, and it was followed by phlegmonous inflammation and abscesses up the limb. As soon as the inflammation had subsided enough, the limb was amputated; and, three days afterwards, in examining it, a quantity of serous-looking fluid oozed from the cut through the integument. I collected some of this, and it formed a perfect fibrinous clot; yet the fibrine in this case had remained among the tissues without coagulating, for three days after the death of the limb, and for many more days during the life of the patient.

Such, too, are the effusions like serum in blisters raised on the skin by heat or cantharides; such the serous effusions of peritonitis, as in hernia, and of many cases of pleurisy and pericarditis. All these fluids, though they may retain their fluidity for weeks or months within the body, during life, may yet coagulate when they are removed from the body. With these, too, may be reckoned, but as the most nearly serous of the class, the fluid of common hydrocele; for I have seen a small coagulum form in such fluid spontaneously; and the presence of fibrine may always be proved by the formation of a clot, when a small piece of blood-clot, or of some

* Pathologische Anatomie, p. 23.

organized tissue is introduced into the fluid.

One can rarely tell why the coagulation of the fibrine in these cases should be delayed: there are, here, the same difficulties as are in all the exceptions from the general rules of the coagulation of the blood. But, it may be observed, the delay of the coagulation is a propitious event in all these cases of effusions; for, so long as the effusion is liquid, absorption may ensue on the subsidence of the inflammation; but absorption is more unlikely and tardy when the fibrine has coagulated. Thus, large quantities of effused fluid, which, we may be sure, contained fibrine, may disappear by absorption from the seats of acute rheumatism or gout, or from the pleura or peritoneum, or from the subcutaneous tissues, and leave only inconsiderable adhesion, or thickening of the affected part. But, on the other hand, when, in the same class of cases, the fibrine coagulates, it may be organised, and the usual consequent phenomena of inflammation will ensue. Thus it is in the cases of what has been called solid oedema (as in this specimen*), where, in the neighbourhood of acute inflammation, an effusion long abides with all the characters of ordinary serous oedema; but, at length, the tissues are found indurated and adhering, the oedema having consisted in the effusion of serum with fibrine, which has coagulated and become organised in the seats of its effusion. Thus, too, it is that the damage done by rheumatism in a part is, on the whole, in direct proportion to the length of time it has subsisted there, and the opportunity given by time for the coagulation of the fibrine.

From what I have said, it will appear that nearly all of what are called serous effusions in inflammation are effusions of fluid containing either fibrine or a material that will organise itself into cells. But it may be said that we often find effusions after death which contain nothing but the constituents of serum, though produced in an inflammatory process. If, however, we examine these cases more closely, they will appear consistent with the others: some of the fluids will coagulate if kept for several hours, or if mixed with other serous fluids, or if fragments of fibrine be placed in them; in others we find reason to believe that fibrine has been already coagulated, or that corpuscles have been formed, but that subsequently they have been disintegrated, or even partially dissolved; and in some we may believe that similar materials have

been decomposed in the last periods of life, or after death.

On the whole, it seems sure that an effusion of serum alone is a rare effect of inflammation, and that generally it is characteristic of only the lowest degrees of the disease. Among the instances of it are, probably, the cases of the chronic forms of hydrops articuli, some forms of hydrocephalus, and some cases of inflammatory oedema of the mucous membrane, as in the oedema of the glottis, and chemosis of the conjunctiva.

In the nearly constant fact of the presence of organisable materials in the products of inflammation, we have one evidence of the likeness between inflammation and the normal process of nutrition, and of its difference from the merely mechanical obstructions or stagnations of the blood. In these, the material effused from the blood is usually the merely serous part: the fluids of anasarca and ascites will not coagulate; they present neither fibrine nor corpuscles, except in the cases of extremest obstruction, when, as in cases of ascites from advanced disease of the heart, one may find flakes of fibrine floating in the abdomen, or masses of it soaked and swollen-up with serum.*

II. The second of the so-called inflammatory effusions is Blood. Among the effusions of blood that occur in connection with the inflammatory process, many, as Rokitsansky has explained, are examples of hæmorrhage from rupture of the vessels of lymph recently become vascular. The new vessels, or their rudiments, are peculiarly delicate; and being apt to rend, like the vessels of new granulations, with a very small force, especially when they are made turgid or dilated by an attack of inflammation of the lymph, they will commonly be sources of considerable bleeding. So, for example, it probably sometimes happens when, as the expression is, a hydrocele is converted into a hæmatocele; some lymph becoming vascular, and being submitted to even slight violence, its vessels break, and blood is poured into the sac.

* It has been supposed that, in mechanical dropsies, the effusion of serum takes place through the walls of the small veins, and that in inflammations an equally mechanical effusion of liquor sanguinis takes place through the walls of the capillaries and small arteries; and this supposition is assumed for an explanation of the difference between a dropsical and an inflammatory effusion. But I think that in a merely mechanical obstruction of the blood, as by disease of the heart, or compression of veins, the pressure of the blood cannot but be increased alike in the veins, capillaries, and arteries, and that, in correspondence with this uniformly diffused pressure, the increased effusion will take place at once through all these vessels, in direct proportion to the permeability of their walls.

* No. 2267 in the Museum of the College.

So, too, probably, it is with many or all the cases of what are called hemorrhagic pericarditis. But of these, which may be called *secondary hemorrhages*, I will speak hereafter.

Primary effusions of blood,—*i. e.* effusions of blood poured from the ruptured vessels of the inflamed part, and mingled with the lymph or other inflammatory product, appear to be rare in some forms or localities of inflammation, but are almost constant in others. Thus,—*e. g.* in pneumonia, extravasated blood-corpuscles give the sputa their characteristic rusty tinge. In the inflammatory red softening of the brain, blood is also commonly effused; and the condition of the vessels, which I described in the last lecture, may well account for their occasional rupture. There are also other cases of these effusions of blood in inflammation; but I believe these imply no more than accidents of the disease.

We must not confound with hemorrhages the cases in which the inflammatory products are merely blood-stained,—*i. e.* have acquired a more or less deep tinge of blood, through the oozing of some dissolved colouring matter of the blood. The natural colour of inflammatory exudations is greyish or yellowish-white, and, even when they have become vascular, their opacity in the recent state prevents their having any uniform tint of redness visible to the naked eye. When inflammatory products present the tinge of redness, it is either because of hemorrhage into them, or because they have imbibed the dissolved colouring matter of the blood: and when this imbibition happens during life, or soon after death, it is important, as implying a cachectic, ill-maintained condition of the blood, in which condition the colouring matter of the corpuscles becomes unnaturally soluble. Thus blood-stained effusions are among the evil signs of the products of inflammation during typhus, and other low eruptive fevers, in syphilis, and in scurvy.

III. Serous effusions, then, appear to be rare as the results of inflammation; and effusions of blood are but accidents in its course. The characteristic primary product of the inflammatory process is *lymph*, which, in one or other of its forms or modifications, may be found as the result of inflammation in all parts.

We might wish that we had for this substance, as effused in inflammation, some other name than one which is already employed for more than one other substance—as for lymph which is contained within the lymphatic vessels, and (by some) for the liquid part of the blood. Yet, on the whole, since all these fluids—the lymph of

inflammation, the lymph of the lymphatic vessels, and the liquid part of the blood—have many, and their most striking, properties in common, it may be better to retain the term lymph for them all, only specifying that which appears as the product of the inflammatory process by calling it “inflammatory” lymph. Thus used it may imply the most frequent, or even the especial, form of inflammatory exudation. The general meaning of the term may be—a liquid effused from the blood-vessels, especially from the capillaries,* which is capable of spontaneously solidifying or organising itself, even while its external circumstances remain apparently the same, and of which the parts thus solidified or organised may proceed by development to the construction of tissues.

The form assumed by lymph in its primary organisation is not always the same; there are, rather, two chief forms of organisation, which, though they are often seen mixed in the same lymph, are yet so distinct as to warrant the speaking of two varieties of inflammatory lymph by the names of *fibrinous* and *corpuscular*.†

To the fibrinous variety belong, as typical examples, all the instances in which inflammatory lymph, effused as a liquid, coagulates into the solid form, and yields, when the fluid is pressed from the solid part, either an opaque-whitish, elastic substance having the general properties of the clot of blood, or the softer, and, as it is supposed, the less perfect or less developed fibrine of the chyle or the absorbed lymph. Such examples of nearly pure fibrinous inflammatory lymph are found, in the cases already referred to, among what have been supposed to be effusions of mere serum. Such are many instances of effusions produced by blisters and other local irritations of the skin in healthy men: such, too, are most of the effusions in acute inflammations of serous membranes, especially in those of traumatic origin, and in those that occur in vigorous men. If, in any of these cases, the lymph be examined after coagulation or deposit in the solid form, it may be hard to distinguish it from the fibrine of the clot of blood. The layers of fibrinous lymph thus formed may be known to the naked eye, when on serous membranes, by their peculiar elasticity and toughness, their compact and often laminated structure, their greyish or yellowish-white and semi-transparent aspect, and their close adhesion to the membrane, even before they have become vascular.

* Or perhaps, only from them: see a remarkable case by Mr. Bowman, Lectures on the Eye, p. 44.

† Corresponding varieties are distinguished or implied by Vogel, p. 30, Dr. Andrew Clark (Medical Gazette, vol. xli. p. 265) and others.

In the corpuscular variety of lymph, no coagulation, in the ordinary sense of the word, takes place; but corpuscles form and float free in the liquid part. Typical examples of this form are found in the early-formed contents of the vesicles of herpes, eczema, and vaccinia; in the fluid of blisters raised in cachectic patients; in some instances of pneumonia; and in some forms of inflammation of serous membranes.

The corpuscles, exudation-corpuscles, or exudation-cells, found in such lymph as this, present very numerous varieties in their several developments and degenerations; but in their first appearance resemble very nearly the primordial condition of the corpuscles of chyle and absorbed lymph, and the white corpuscles of the blood.

I may remark here, that, in this fact of a single primordial form existing in the rudiments of many organisms, which in later periods of their existence are widely different, we find a repetition of an important fact in the first development of beings. In the early embryo, even when already some traces of the future shape and construction are dimly drawn, the whole mass may be composed of cells which are all alike in their chief characters; alike, that is, in what is visible, though potentially so different, that while one group are being transformed into blood-cells, others are coalescing to form muscular fibres, others are issuing processes to form the primordial blood-vessels or lymphatics. All these, and other equally different ultimate forms, are developed from the nearly uniform mass of primordial embryo- or germ-cells. And so it is in later life; many of both the normal and the morbid structures start from one primordial form, and, thence proceeding, diverge more and more widely in attaining their several perfect shapes.

Of this primordial form we have perhaps the best instances in the white corpuscles of the blood, and in the corpuscles of lymph in the lymphatic vessels and thoracic duct. The same form is characteristic of the corpuscles in the vesicles of herpes and eczema, and in some forms of macus. In all these, the first discernible organic form, the form of what might with propriety be called the *primordial cytoblast*, is that of a minute mass of soft, colourless, or pale greyish-white substance, round or oval, pellucid, but appearing, as if through irregularities of its surface, dimly nebulous or wrinkled. It does not look granular, nor is it formed (as many suppose) by an aggregation of granules; nor, in its earliest state, can any cell-wall be clearly demonstrated, or any nucleus. But, as the development of this cell-germ or cytoblast

proceeds, a pellucid membrane appears to form as a cell-wall over its whole surface; and now, when water is added, it appears to penetrate this membrane, raising-up part of it like a clear vesicle, while upon the other part the mass retreats, or subsides, and appears more nebulous or grumous than before. In yet another state, which appears to be a later state of development, the action of water not only raises up a cell-wall, but breaks-up and disperses the outer part of the contents of the cell, i. e. of the enclosed mass of the primordial cytoblast, and exposes in its interior a nucleus, which is commonly round, clearly defined, pellucid, and attached to the cell-wall.

To such a nucleated cell, if we name the corpuscle from which it is developed the *primordial cytoblast*, or *cell-germ*, we may assign the name of *primordial cell*. From its various developments are derived, in the products of inflammation, all the several forms of corpuscles that are described as plastic cells, fibro-cells, caudate or fibroplastic cells, and some forms of filaments; while, from its various degenerations, descend those known as pus-corpuscles, granule-cells, granule-masses, inflammatory globules, and much of the molecular and debris-like matter that makes inflammatory effusions turbid.

The examples of lymph which I have quoted are chiefly such as may be considered typical of the two varieties: the first, in which, spontaneously coagulating, it presents fibrine, either alone or mingled with very few corpuscles; and the second, in which corpuscles are developed alone, or with only a minimum of fibrine. But, in a large number of examples of inflammatory lymph, the fibrine and the corpuscles occur together, mixed in various proportions, the one or the other preponderating. Such instances of mixed lymph are found in the fluid of blisters in all persons not in full health; in all but the freshest inflammations of serous membranes; in most of the inflammatory deposits in cellular tissue, and in most of the viscera; and in the false membranes of croup and other similar inflammations of mucous membranes.

Now, in general, and in the first instance, the proportions of fibrine and of corpuscles that are present in the lymph of an inflammation will determine the probability of its being organised, or of its degenerating. The larger the proportion of fibrine in any specimen of inflammatory exudation (provided it be healthy fibrine), the greater is the probability of its being organised into tissue; such as that of adhesions, indurations, and the like. On the other hand, supposing the other conditions for development or degeneration to be the

same, the larger the proportion of corpuscles in lymph, the greater is the probability of suppuration or some other degenerative process, and the more tardy is any process of development into tissue. In other words, the preponderance of fibrine in the lymph is generally characteristic of the "adhesive inflammation;" the preponderance of corpuscles, or their sole existence, is an essential feature of the "suppurative inflammation.*

The knowledge of this fact may help us to learn the several conditions on which, in the first instance, depend these two forms of inflammation, the contrast between which has lost none of its importance since the time of Hunter. I will therefore at once enter on this question;—what are the conditions that determine the production of one or the other variety of lymph,—the fibrinous, which is as the symbol of the adhesive inflammation, or the corpuscular, which may be that of the suppurative inflammation?

The conditions, then, which are chiefly powerful in determining the character of lymph, are three; namely—

1. The state of the blood;
2. The seat of the inflammation;
3. The degree and character of the inflammation.

First, in regard to the influence of the state of the blood in determining the characters of an inflammatory product, Rokitan-

* In this view, the fibrinous and the corpuscular varieties of lymph nearly correspond with those which Dr. Williams, in his *Principles of Medicine*, and others, have named plastic and aplastic; but they do not completely do so. In different instances of both varieties, very diverse degrees of plastic property may be found; and the occurrence of development or degeneration depends on many things besides the primary characters of lymph. They more nearly correspond with what Rokitanaky (*Pathologische Anatomie*, l., 196) has distinguished as fibrinous and croupous; the varieties which he names croupous α , β , and γ , representing the several grades of lymph in which the corpuscles gradually predominate more and more over the fibrine, and assume more of the characters of the pus-cell. I would have used his terms, but that, in this country, we have been in the habit of considering croupous exudations to be peculiarly fibrinous.

In the last course of Lectures (*MEDICAL GAZETTE*, Vol. xliii.), I described the healing of subcutaneous wounds as usually accomplished by a fibrinous material, and that of open wounds by cells developing into fibres. These materials exactly correspond in appearance and modes of development with the fibrinous and corpuscular varieties of inflammatory lymph; and I was quite wrong in implying that fibrine alone is not a product of inflammation, and that all the filamentous tissue formed after inflammation is developed through cells. What was then said, however, of the liability of the cells formed in the repair of open wounds to be arrested in their development, or to degenerate into pus-cells and lower forms, and of the consequent insecurity of this mode of repair as compared with the subcutaneous, is confirmed by the corresponding history of the two varieties of lymph.

tansky has happily expressed it by saying that "the product of the inflammation exists, at least in part, in its germ preformed in the whole blood." Some, indeed, have supposed that lymph is only the liquor sanguinis exuded through the walls of the blood-vessels; but of this opinion we cannot be sure, and many facts will not agree with it. Still, it is not difficult to show that a certain character is commonly impressed by the state of the blood on the inflammatory product from it.

I will not refer here to the cases of inoculable diseases, in which some of the morbid material that was in the blood may be incorporated with the product of a local inflammation, though in these the correspondence of the blood and the inflammatory product from it is manifest enough; but I will refer to cases that may show a more general correspondence between the two, a correspondence such that, according to the state of the blood, so is the lymph more fibrinous or more corpuscular; more characteristic of the adhesive, or of the suppurative inflammation.

Some of the best evidence for this is supplied by Rokitanaky, in the first volume of his *Pathological Anatomy*; a work that I cannot mention without a tribute of respect and admiration for its author, since in it, more than in any other of his writings, he has proved himself the first among all pathologists,—in knowledge at once profound, minute, and accurate, in power of comprehending the vastest catalogue of single facts, and in clear discernment of their relations to one another, and to the great principles on which he founds his systems. In this work, he has shown clearly, that the characters of inflammatory deposits in different diatheses correspond very generally and closely with those of the coagula found in the heart and pulmonary vessels after death; and that, in general, the characters of lymph formed during life will be imitated by those of clots found in the body after death, when the fibrine of the blood may coagulate very slowly, and in contact with organic substances.

Other evidence may be obtained by examining the products of similar inflammations excited in several persons, in whom the state of the blood may be considered dissimilar; and here the evidence may be more pointed than in the former case; for, if it should appear that the same tissue, inflamed by the same stimulus, will, in different persons, yield different forms of lymph, we shall have come near to certainty that the character of the blood is that which chiefly determines the character of an inflammation. To test this matter, I examined carefully the materials effused in blisters raised by cantharides-plasters

applied to the skin of thirty patients in St. Bartholomew's Hospital. Doubtless, among the results thus obtained, there might be some diversities depending on the time and severity of the stimulus applied; still, it seemed a fair test of the question in view, and the general result proved it to be so. For, although the differences in the general aspects of these materials were slight, yet there were great differences in the microscopic characters; and these differences so far corresponded with the nature of the disease, or of the patient's general health to whom the blister was applied, that at last I could generally guess accurately, from an examination of the fluid in the blister, what was the general character of the disease with which the patient suffered. Thus, in cases of purely local disease, in patients otherwise sound, the lymph thus obtained formed an almost unmixed coagulum, in which, when the fluid was pressed out, the fibrin was firm, elastic, and apparently filamentous. In cases at the opposite end of the scale, such as those of advanced phthisis, a minimum of fibrin was concealed by the crowds of corpuscles imbedded in it. Between these were numerous intermediate conditions which it is not necessary now to particularize. It may suffice to say that, after some practice, one might form a fair opinion of the degree in which a patient was cachectic, and of the degree in which an inflammation in him would tend to the adhesive or the suppurative character, by the microscopic character of these exudations. The highest health is marked by an exudation of the most perfect and unmixed fibrine; the lowest, by the most abundant corpuscles, and their nearest approach, even in their early state, to the characters of pus-cells. The degrees of deviation from general health are marked either by increasing abundance of the corpuscles, their gradual predominance over the fibrine, and their gradual approach to the character of pus-cells, or else by the gradual deterioration of fibrine, in which, from being tough, elastic, clear, uniform, and of filamentous appearance or filamentous structure, it becomes less and less filamentous, softer, more paste-like, turbid, nebulous, dotted, and mingled with minute oil-molecules.

I would not make too much of these observations. They are not enough to prove more than the rough truth, that the products of similar inflammations, excited in the same tissue, and by the same stimulus, may be in different persons very different, varying especially in accordance with the several conditions of the blood. Yet, simple as the observations are, they may illustrate what often seems so mysterious—

namely, the different issues of severe injuries inflicted on different persons. To what, more than to the previous or some acquired condition of the blood, can we ascribe in general the various consequences that follow the same operations in different patients? The local stimulus, and the conditions by which the inflammatory effusion finds itself surrounded, may be in all alike; but, as in the simpler case of the blister, the final events of the inflammation are according to the blood.

I cannot doubt that a yet closer correspondence between the blood, and the products of inflammation derived from it, would be found in a series of more complete observations,—in such, for instance, that the characters of the blood drawn during life, or, much better, of the clots taken from the heart after death, might, in a large number of patients, be compared with those of inflammatory exudations produced, as in the cases I have referred to, by the same stimulus applied to the same tissue. In the few cases in which I have been able to make such examinations, this view has been established; and it is confirmed by the parallelism between the varieties of lymph that may be found in blisters and the varieties of the fibrinous coagula in the heart described by Rokitsansky.* The varieties of solidified fibrine which he enumerates and classifies as fibrines 1, 2, 3, 4, are very nearly parallel with what I have enumerated as the stages from the best fibrinous to the corpuscular lymph; and, as I have already implied, he regards these clots found in the heart and vessels as representing the different "fibrinous crases" or diatheses of the blood.

I mentioned, as the second condition determining the issue of an inflammation, the seat or tissue which it occupies. I need hardly remind you that, since the time of Bichat, it has been a general impression that each tissue has its proper mode and product of inflammation. The doctrines of Bichat on this point were, indeed, only the same as Mr. Hunter held more conditionally, and, therefore, more truly; but they gained undisputed sway among the principles of that pathology which rested on general anatomy as its foundation.

The facts on which it is held that, in general, each part or tissue is prone to the production of one certain form of inflammatory exudation, are such as these,—that, *e. g.*, in the apparently spontaneous inflammations of the skin, lymph with corpuscles alone is produced, as in herpes, eczema, erysipelas; that in serous mem-

* *Pathologische Anatomie*, B. i. p. 142.

branes, the lymph is commonly fibrinous, and has a great tendency to be organised, and form adhesions; that in mucous membranes there is as great a tendency to suppuration; that in the lungs, both fibrine and corpuscles are abundant in the lymph, and the corpuscles have a remarkable tendency to degenerate into either pus-cells or granule-cells; that in the brain and spinal cord the tendency is to the production of a preponderance of corpuscles, that quickly degenerate into granule-cells; while in the cellular tissue, both fibrine and corpuscles appear, on the whole, equally apt to degenerate into pus, or to be developed into filamentous tissue.

Now these are, doubtless, facts; but the rules that it is sought to establish from them are not without numerous exceptions. The instances I have lately quoted show that, in one tissue at least, the skin, the products of inflammation will vary according to the condition of the blood, although the inflammation be always similarly excited by the same stimulus. So, too (as Mr. Hunter remarks*), if it were the tissue alone that determines the character of an inflammation, we ought to have many forms of inflammation in the same stump after amputation; whereas all is consistent, or the differences among the tissues are only differences of degree: they all adhere, or all granulate and suppurate, or all alike inflame or slough.

It is therefore not unconditionally true that each tissue has its proper mode and product of inflammation. It has been too much overlooked that a morbid condition of the blood, or perhaps even of the nervous force, may determine at once the seat of a local inflammation, and the form or kind of inflammatory product. Thus, *e.g.*, the variolous condition of the blood may be said to determine at once an inflammation of the skin, and the suppurative form of inflammation; for, in variola, whatever and wherever inflammations arise, they have a suppurative tendency. So, in rheumatism, whether it be seated in muscles, ligaments, or synovial membranes, in serous membranes, or in fibrous tissues, there appears the same tendency to serous and fibrinous effusions, which are slow to coagulate or organise, and even less prone to suppuration. And so in the purulent diathesis; in whatever tissue the malady of the blood may localise itself, the tendency of the inflammatory product is to the formation of pus. The same might be said of the local inflammations that are characteristic of typhus and of gout, and, I believe, of all those diseases in which a morbid condition of the blood manifests

itself in some especial local error of nutrition. And all these cases are illustrative of the general truth, that each morbid condition of the blood is prone both to produce an inflammation in a certain part or tissue, and to give to that inflammation a certain form or character.

Cases, however, remain that prove some influence of the tissue in determining the product of its inflammation—in determining, I mean, the primary form, as well as the later development, of the product: and the true influence of the tissue in this respect is best shown in some of the cases in which inflammation, excited, apparently, by the same means, has happened coincidentally in two or more very different parts in the same person. Thus we may find, *e.g.*, that in pleuro-pneumonia the lymph on the pleura is commonly more fibrinous than that within the substance of the lung; and adhesions may be forming in the one, while the other is suppurating. In cases of coincident pneumonia and pericarditis, the lymph in the lung may appear nearly all corpuscular, and all the corpuscles may show a tendency to degenerate into granule-cells, while the lymph on the pericardium may have a preponderance of fibrine, and what corpuscles it has may tend to degenerate into pus-cells. So, too, one may find, in the substance of an inflamed synovial or mucous membrane, abundant lymph-cells, while all the exudation on its surface may appear purulent.

Other instances of this kind might be cited,—enough to establish that the nature of the tissue or part affected has some share in determining the character of the products of its inflammation. On the whole, therefore, the best conclusion may be that, in any given case, the issue of an inflammation, and especially as to whether it will correspond with the adhesive or suppurative form, may be represented as the resultant of these two chief influences—the previous condition of the blood, and the nature of the part affected.

I will only add, that the supposed influence of a tissue in determining the character of the lymph formed in its inflammations, may be very probably explained by believing that the primary product of inflammation is, often, a mixture of lymph, and of the secretion, or other product of the inflamed part, more or less altered by the circumstances of the inflammation. When it is seen that in inflammations of bone the lymph usually ossifies,—in those of ligament is converted into a tough ligamentous tissue,—and that, in general, lymph is organised into a tissue more or less corresponding with that from whose vessels it was derived,—it is usually concluded that this happens under what is called the assi-

* Works, vol. iii. p. 813.

milative influence of the tissue adjacent to the organised lymph. But it seems more probable that no such assimilative force is exercised after the effusion; rather, we may explain the facts by believing that the material formed in the inflammation of each part partakes, from the first, in the properties of the natural products of that part; in properties which we know determine the mode of formation independently of any assimilative force.

We have some evidence of this in the products of inflammation of secreting organs, the only structures of which we can well examine the natural products in their primary condition. In a moderate amount of inflammation of a secreting gland, the discharge is usually a mixture of the proper secretion in a more or less morbid state, and of the inflammatory product. Thus we find morbid urine mixed with fibrine, or albumen, or pus. In cases of inflamed mucous membranes, the product is often a substance with characters intermediate between those of the proper mucous secretion and those of lymph. Or, again, in some membranes we may perceive a relation between their natural secretion and the usual products of their inflammation.

With these considerations I may connect what is to be said of the influence of the third among the conditions enumerated as determining the character of any inflammatory product—namely, the degree or severity of the disease. For, as a general rule, the less the degree of inflammation is, the more is the product like that naturally formed in or by the part, till we descend to the border at which inflammation merges into an exaggerated normal process of secretion; as in hydrops articuli, hydrocele, coryza, &c.

The analogies between secretion and nutrition are so numerous, the parallel between them is so close, that what can be shown of one may be very confidently assumed of the other. We may therefore believe that, in the inflammation of any part, the product will, from the first, have a measure of the peculiar properties of the material employed in the normal nutrition of the part: that, as in the inflammation of a secreting organ, some of the secretion may be mingled with the product of the inflammation, so in that of any other part, some of the natural plasma—i. e. some of the material that would be effused for the healthy nutrition of the part—may be mingled with the lymph. The measure of assimilation to the natural structure will bear an inverse proportion to the severity of the inflammatory process, because, the more the conditions of nutrition deviate from what is normal, the more will the material effused from the vessels deviate from the normal

type. In severest cases of inflammation we may believe that unmixed lymph is produced, the conditions of the due nutrition of the part being wholly suspended; but when the inflammation is not altogether dominant, its product will be not wholly contrary to the natural one, and will, from the first, tend to manifest in its development some characters correspondent with those of the natural formations in the part. Thence, onwards, this correspondence will increase as the new tissue is itself nourished: as scars improve, so do false membranes and the like become more and more similar to natural tissues.

To sum up, then, what may be concluded respecting the conditions that, in the first instance, may determine the adhesive or suppurative characters of an inflammatory exudation; they are—1st. The state of the blood—its diathesis or crasis—the power of which is evident in that the same material may be exuded in many inflamed parts in the same person; in that this material may exhibit peculiar characters correspondent with those of the blood itself; and in that, in different persons, an inflammation excited in the same tissue, and by the same stimulus, will produce different forms of lymph, corresponding with differences of the blood. 2d. The seat of the inflammation, and the tissue or organ affected, of which the influence is shown by cases in which, with the same condition of blood, different exudations are produced in different parts or organs. 3d. The severity, and acute or chronic character, of the inflammatory process, according to which the product deviates more or less from the character of the natural secretion or blastematous effusion of the inflamed part.

The primitive character or tendency of any case of inflammation might be represented as the resultant of three forces issuing from these conditions.

The last product of inflammation of which I have to speak is *Mucus*.

Peculiar difficulties, owing to imperfect investigations of what normal mucus really is, beset this portion of our subject. I will only venture to say that—

1. Normal mucus is a peculiar viscid, ropy, pellucid substance, which, of its own composition, has no organised particles. Such mucus is to be found in the nasal cavities of sheep and most large mammals, in the human uterus, and in the gall-bladder when its duct has been lately obstructed. In all these mucus may be found without corpuscles; and probably there are other examples of such pure and unmixed mucus.

But 2d. With all these, accidental mixtures commonly occur of epithelial parti-

cles from the mucous membrane. And these particles will vary according to the seat of the membrane; the fluid with which the mucus may be mixed, as gastric acid, intestinal alkali, &c.; the time the mucus may lie before discharge; and other such conditions.

3. The first effect of a stimulation, within the normal limits, will be to increase the secretion of the proper mucus, making it also more liquid—to increase the quantity of the epithelium cast-off with the liquid—and, often, to induce the premature desquamation of the epithelium, so that particles of it imperfectly formed may be found in the mucus. Many of these immature epithelial particles have been named mucus-corpuscles, or mucus-cells.

4. In an established inflammation of a mucous membrane, there appear, in greater or less proportion mixed with mucus, materials which have naturally no part in it, and which may be closely paralleled, or considered identical, with the products of inflammation in other parts. I am, indeed, disposed to think that we should not draw a strong contrast between the inflammatory products of mucous membranes and those of serous membranes and other parts, except in relation to the material with which, in the several cases, the inflammatory lymph is mixed. For in certain inflammations of mucous membranes we find fibrinous exudations, as in Hunter's experiments of injecting strong irritants into the vaginae of asses*; in probably less pure forms in croup and bronchial polypus†; and, as I have seen it, in the renal pelvis, ureters, and bladder in a case of calculus. In other cases, we find corpuscles, which appear to differ from those in the exudations already described only because of the peculiarly viscid fluid in which they lie. All are, alike, lymph-corpuscles: but in the one case they lie in a serous, in the other in a mucous fluid.

5. From these inflammatory products may be derived, by various degenerations of the fibrine, the flaky and molecular materials which commonly make morbid mucus look turbid and opaque; and by corresponding degenerations of the corpuscles—4. *e.* of the lymph-corpuscles, not of any normal cells or nuclei—the more frequent pus-cells, which make the transition to the pure pus secreted by mucous membranes in active inflammation.

Such degenerations are more frequent in the products of inflamed mucous surfaces than are any forms of development. Development of fibrine, I suppose, never happens here; but in the corpuscles some

indications of it may be found, especially when the inflammation is very slight, as in the end of a bronchitis. If the grey, smoke-coloured mucus expectorated at this time be examined, it will be found that the peculiar colour, though commonly ascribed to the mixture of inhaled carbon, is due to the abundance of cells containing more or less numerous black pigment-granules. Particles of carbon or soot may by chance be present, but they only trivially contribute to the colour: it depends on the number of these pigment-cells, to which it is easy to trace the transitions from lymph or mucus-corpuscles. The chief stages of transition are seen in that the cells enlarge, become clearer, and acquire one or two clear oval nuclei; but, at the same time, minute black granules, almost like those of melanotic cells, accumulate in them; and these, increasing in number and clustering, may at length fill the whole cell, while the nucleus disappears. Subsequently the cell-wall may burst or dissolve, and the black granules be set free.

It may not be supposed that the black granules are in any way derived from inhaled carbon, although it seems that this kind of mucus is most abundant in those who are exposed to atmospheres laden with coal-smoke; for the colour is completely destroyed by immersing the mucus in nitric acid or solution of chlorine. The occurrence of such pigment-cells being, I believe, peculiar to the mucus of the air-passages, may be connected with the general tendency of inflammatory products to imitate the properties of the natural products of the inflamed part; for they closely resemble the black pigment-cells from which the lungs and bronchial glands derive their black spots and streaks and other marks. And, it may be added, that their peculiar abundance in the slightest forms of bronchitis, compared with their absence in acute cases, affords another example that the likeness of the morbid to the natural product is inversely proportionate to the severity of the inflammation.

DENUDED BONE.

SOME beautiful instances of the power of the *vis medicatrix* were observed, where bone had been, for a considerable space, deprived of its periosteum. The most interesting was in the stump of the leg of J. Sloan, amputated below the knee. Ulceration of the flap took place, leaving the point of the tibia projecting, quite bare for at least one inch square. Granulation slowly covered it from the circumference, without the necrosis of any part, even superficially. —*American Journal of Medical Sciences*, 1850.

* Works, vol. iii. p. 269, 341. Museum of the College, Nos. 83, 84.

† See Hentle, in his *Zeitschrift*, T. ii. p. 178.

Original Communications.

THE
CHOLERA IN PLYMOUTH.

By WILLIAM F. SOLTAU, M.B.

è Coll. Ball. Oxon.

[Continued from page 572].

THE serenity and brightness of a sunny atmosphere is suddenly dissipated by the darkness and noise of the howling tempest, and, amidst the ruins that it leaves behind it, the philosopher is found investigating the laws which appear to regulate such strange visitations. The nation which yesterday was reposing in all the security of internal peace, is today convulsed in the agonies of revolutionary throes, and cannot be quieted even when delivered of its monster child. The wary statesman beholds the sight with wonder, and is not satisfied until he has, as he thinks, discovered the cause which fathered such an offspring. That domain, the supervision of which has been entrusted to us as medical men, has, too, been mysteriously invaded; and the hidden enemy, having finished his deadly work, has left us to speculate on his mode of attack and our system of defence. Such a subject is surrounded with many and great difficulties, and, if not properly investigated, will find us, at the conclusion of our inquiries, much in the same position as when we commenced them. Nothing, perhaps, does so much harm to the cause of scientific research, as that peculiar tendency in some minds first to form a particular theory upon a given subject, and then afterwards to reason it out by facts. With such persons the question is settled at the outset, and, starting with a conclusion, they are satisfied in their inquiries only to receive that which accords with it, whilst they reject that which questions its accuracy: hence the truth of that somewhat startling statement made by the late Mr. Canning, that "nothing is so fallacious as figures except facts;" for, if not regarded in their every bearing, they may be so coloured as to be produced as evidences in support of theories directly opposed to each other. The mode of the spread of cholera has

naturally attracted the attention of all who have witnessed its rapid increase after its first appearance in any place; and, as the conclusions arrived at by no means agree with each other, the question still remains an open one.

There are two public bodies from which we have a right to expect some important information on this point, as well as upon every other connected with the history of this mysterious disease,—the Board at Gwydyr House and the College of Physicians. The opportunities they have had of investigating every minute detail, and inquiring into every particular developed in the progress of cholera, must have provided them with a store of facts whence, it is to be hoped, they will be enabled to deduce some definite laws which regulate its spread, and govern its treatment. Unless they have thus been enabled to dispel much of the darkness that has so long enveloped the whole history of this epidemic, it is difficult to know from what other source we are to look for light. As a public body in which is supposed to be concentrated all the wisdom of medical knowledge,—as a corporation whose constitution is based on "*salus populi suprema lex*,"—the College of Physicians may be well looked upon at the present juncture as the oracle from whence we may justly expect a satisfactory response to some of the difficult questions which are now before it for solution. It is to be hoped they will be answered without ambiguity; for no reply is preferable to one that may be construed either way. We are too prone to imitate the example of the Pythoness of old, who, when consulted on any grave subject, rather than confess her ignorance, gave her advice in such dubious language as to leave the question as much unanswered in reality as it was before it was put to her,—nay, in some cases even more so; for in her replies so wary was she, that she made them read both ways; and therefore, when remonstrated with for having given bad advice, could always hide her own under the ignorance of those who consulted her, for having misunderstood the meaning she intended to convey. All, then, whether in or out of the profession, are looking forward with much interest to the result of the researches recently made by the College of Physicians, as likely to settle the several points of dispute which at

present exist in the minds of many relative to the spread of this fearful disease. The subject is a very grave one; and, however it is ultimately settled, will greatly affect the interests of the public at large. Whilst we are expecting much from the College of Physicians, we have a right to demand more of the Central Board of Health. They have had every facility put in their way to enable them to carry on their investigations. They have had no lack of funds to stay their operations. Created but for one object, and declared to be guardians of the public health, this is the beginning and the end of their work; and if, under ordinary circumstances, it be their duty to investigate those causes which aid in the spread of disease, how much more is this incumbent upon them when a scourge like the one of which we are now treating has slain its tens of thousands amongst us, and has left behind it bills of mortality which are not to be equalled in the annals of history. But it may be thought that this is foreign to the subject before us. Such, however, is not the case. If the Board of Health, as by law established, is to be of any use commensurate with the expense at which it is kept up, that will be manifested from time to time in the results of its labours when made known to the world. At present, as far as this town is concerned, it is difficult to see how it is to be profited by the existence of that Board. During the time that the cholera prevailed here, all the good that was done originated spontaneously from the local authorities. A medical inspector, it is true, visited us, and offered certain suggestions, to be adopted

or not as the local Board thought fit; but beyond this, and the reception of certain printed papers, which, as a matter of form, were forwarded from time to time from Gwydyr House, we have nothing as yet for which we have especially to congratulate ourselves upon the existence of such a Board. A memorial signed by more than a tenth of our rate-payers has been forwarded to its members, requesting that they would send down a commission to investigate the sanitary condition of the town as to drainage, &c., so as to decide whether the great mortality which prevailed here during the cholera was or was not to be attributed to any defect in the local act of Parliament which at present governs us in these matters.

The Improvement Commissioners, to whose care the important duties of draining and cleansing the town are entrusted, have invited inquiry; but as yet, no commission has arrived, though some three or four months have elapsed since the requisition was forwarded to the central Board. This ought not to be, when we remember that in Plymouth nine hundred persons were carried off by the late epidemic within the space of four months. It would be a great satisfaction to know whether the cause of so mighty an evil can be remedied. It is for the Board of Health in London to decide the question. In the information they have been seeking from the local Boards of Health, in the various towns wherein the cholera raged, it is to be regretted that, as far as Plymouth was concerned, they did not forward the subjoined schedule at an earlier period. It never reached the

Name of street.	No. of houses	Cases of		Deaths from		Occupation of party attacked.	General character of locality.	To what extent previously visited by epidemic disease.	Quality of houses.	No. living in houses.	General remarks.
		Diar.	Chol.	Diar.	Chol.						

medical officers of the several districts into which our town was divided until they had relinquished their respective posts at the disappearance of the epidemic. The consequence is, that much of the valuable information sought for in this formula could not be satisfactorily given, as the time had passed for obtaining it; whereas, had we received

it whilst engaged in our daily duties of visiting the sick, the answers to its several queries might have easily and accurately been obtained. As, therefore, all information on such points, if to be of any lasting use, must be based upon certainty, it is better not to give any which is merely dependent on memory. In offering, then, the following remarks on

the mode of communication of cholera, I am merely stating the opinion to which my own observation led me; and, if it can be proved to be fallacious by the joint experience of the two bodies above referred to, I will willingly confess my error, knowing that "in the multitude of counsellors there is wisdom."

The chief mode of the spread of cholera is by infection, or in other words by its communication from the sick to the healthy. It will, therefore, be necessary to mention the grounds on which such a statement is founded. The cholera was not heard of in Plymouth before it was brought here, and there are three different sources whence it was imported. First, an emigrant ship, which arrived here in June, and for which nurses were provided from the town, had the disease on board so badly as to be obliged to seek a refuge in our port. Secondly, the village of Noss, distant about seven miles from us, was, during the same time, severely visited by the epidemic, said to have been introduced by one of its inhabitants, a sailor by trade, who had, whilst fishing, boarded a passing vessel in which the disease was raging. The communication between Noss and Plymouth is constant on market days, and the second fatal case in our town occurred at the shop at which many of the people of that place were accustomed to buy their bread. Thirdly, the first fatal case in Stonehouse Lane was that of an Irishman, who had been handed from an emigrant ship the previous evening, and who died on the following day. Here, then, are three different sources whence the seeds of the disease might emanate. From the 9th of June, up to the 9th of July, there were sporadic cases of cholera throughout the town; but it was not until a few days before the latter date that the disease put on an epidemic character. Before this the town had been remarkably healthy, and free from the ordinary amount of diarrhoea so common at this season of the year. Is there any thing unreasonable, then, in concluding that it was thus communicated to our town? Again, it frequently happened that persons employed as nurses were attacked, and some fell victims to the disease. When the emigrant ship arrived here it was necessary to obtain nurses from the town. There was no cholera here then; yet two or three of them had the disorder on board.

How does such a disease spread in a ship, which is changing its locality every hour, except it be by communicating itself through the sick to the healthy? I will give the following case, which struck me much at the time of its occurrence, and then ask any candid person whether there is not contained in it a fair evidence of infection. I was attending a man called Tayler, in the collapsed stage. His brother was in the room assisting in rubbing his legs. The brother's son, a fine young man of 26, was also present, with his young wife. The man Tayler died, and I visited the house the next day, to see that the rooms were fumigated, and the linen destroyed. The young man was there, and having explained to him what should be done, I asked him for his father. He told me that he was confined to his bed, having been taken ill with the disease the previous night. Two days afterwards the nurse called at my house for a certificate of attendance on the man Tayler. She said to me, "You remember the young man you spoke to, Sir, in his uncle's house?" I replied "yes." "He is dead, sir, and so is his wife." I found, on further inquiry, that he had gone to his uncle's funeral, and during his absence his wife was taken ill. In the evening he went to inquire for his father, was taken ill in his house, and died in 14 hours, his poor wife not even knowing that he was ill, and she survived him about 10 hours, her attack having lasted 38 hours before it proved fatal. Now if this had been a case of small-pox instead of cholera, would there be any question as to how these three persons became affected with the disease? They all three are in good health, they enter the house of a relative who is labouring under an attack of a prevailing epidemic, they return to their homes, and within twenty-four hours are each attacked by the same malady. If there be such a thing as infection, surely it exists in instances like the above. Whether in small-pox, measles, scarlatina, or the like, we maintain that the evidence of their communication by infection is only based on a series of facts similar to the above, and inferences thence deduced. But we will adduce another case. When the cholera broke out in Stonehouse Lane (a portion of our town inhabited by the lowest Irish), some of them took fright, and moved off as quick as possible. This class of

persons are very migratory in their habits, and have little belonging to them, saving the rags wherewith they are clad. They beg their way from town to town, and thus subsisting, it matters not to them where they are. Terrified at the mortality of the epidemic, they left the town in various groups. About sixteen miles from Plymouth, on the confines of the moor, is the village of Brent. A party of four of these Irish reached the spot, and sought refuge in what is called the trampers' house. They had scarcely arrived, when one of them was seized with cholera. Up to this period the village had been quite healthy, and from its elevated situation and bracing atmosphere it was regarded as a place that would most probably escape the visitation. A gentleman of our town, who was staying there at the time, told me that on hearing what had occurred he visited the infected house, and saw the woman to whom it belonged. From her he inquired all particulars. The man, who was the one seized on his arrival, had died the preceding day, and up to that time no new case had occurred. My informant returned home. The next day he heard to his dismay that the woman of the house, with whom he had been conversing, had been attacked by cholera during the night, and that she was dead. Another in the same house fell a victim to the disease, which carried off altogether eight persons in the village. Now, how was the epidemic introduced into this place? Surely by the arrival of an infected person from an infected place. He communicates it to the inmates of the house which he enters, who before this were in health. If instances of this kind do not prove that cholera propagates itself through human intercourse, I know not what will, and the ingenuity must be great which will explain such cases away. The rapidity with which cholera spreads after having once made its appearance in a locality, has given rise to various theories as to its mode of propagation. Of these, two especially attracted our notice, as emanating from persons of high repute in our profession, who had been carefully watching its phenomena with an especial view to the discovery of the point. I refer to the investigations and conclusions of Messrs. Brittan, Swayne, and Budd, of Bristol, and those of Dr. Snow, of London. Now it is evident that these gen-

tlemen had come to the decision that cholera *was in some way communicated by the sick to the healthy*, and in this sense they allowed it to be infectious. The theory of the cholera fungi was a very beautiful one, and contains in it much more of rational probability than the conclusion of those who deny the possibility of its spread to any other agency than the condition of the localities in which it is found. That a district should be one day comparatively healthy, and the next day visited by a disease which in a few hours spreads far and wide amongst its inhabitants, is a mystery which requires something more than the mere nature of the locality for its solution. The effect thus produced in the minds of the many is not to be wondered at, who are led in the terror of the moment, and by the peculiar suddenness of the visitation, to ascribe it to some destructive agent secretly introduced amongst them. Hence in the history of the black death, which in the fourteenth century produced such havoc throughout Europe, we read that a very general opinion prevailed on the outbreak of the pestilence that the water had been poisoned; and, in Germany especially, the suspicion of the people was directed against the Jews, who were supposed to have conspired together to destroy the Christians. The results of this ungrounded accusation led to the most cruel persecution of the suspected people; and so persuaded were the public generally of the method thus adopted for their destruction, that they stopped up all the wells in which the poison was supposed to have been placed. The suddenness of the appearance of the disease, and its rapid spread, led to the conclusion, which also prevailed amongst the lower orders in Paris, when the cholera first broke out there in 1832. In both these instances, that which struck the mind with astonishment was the extraordinary number that were attacked with similar symptoms; and hence the conclusion that they must have partaken of some common poison. Such an inference was natural and fair: the error consisted in ascribing the poison to human agency.*

[To be continued.]

* We regret that we have been compelled to postpone until next week the conclusion of this paper.—ED. GAZ.

UPON
TUBERCULOSIS OF THE UTERUS.

By HOLMES COOTE, Esq.
Demonstrator of Anatomy at St. Bartholomew's Hospital.

ULCERATIONS of the uterus, occurring in the later periods of life, are, I believe, almost invariably regarded as of a cancerous nature. There are but few authors who speak of the deposit of tubercle in the organ, with subsequent softening, as is not uncommonly witnessed in the prostate gland in the m.a.e. I was lately present at a post-mortem examination in Bethlem Hospital, conducted by Mr. Lawrence, in which the effects of this latter affection were seen in its early stages. The particulars of the case may be interesting to the profession, inasmuch as the infrequency of such morbid appearances is dwelt on by Rokitsansky, whose sphere of personal observation has, perhaps, been wider than that of any one living, and confirmed by the experience of many to whom diseases of the uterus have long been a subject of particular study.

An aged female lunatic, incurable, who, during thirty years' residence in Bethlem Hospital, had evinced nothing but moroseness, and a disposition to be spiteful to those who came near her, became, a few months before death, talkative, lively, and good-tempered. She died apparently worn out, but without any manifestation of active organic disease.

Post-mortem examination, April 3d, 1850.—The body was very much emaciated, the face pallid and shrunk, and the vessels of the exterior of the cranium bloodless; skull-cap thin and shallow; dura mater healthy; arachnoid membrane transparent: the pia mater, infiltrated by a large quantity of clear serous fluid, occupied over the whole surface of the brain wide spaces between the convolutions, which were atrophied, shrunk, and separated one from another: many of these spaces would have readily received the end of the forefinger. The cut surface of the brain presented numerous red points; but its substance was firm and white, and there was but a small quantity of clear serous fluid in the ventricles. Cerebellum healthy. When the brain was removed,

a considerable quantity of fluid poured from the base of the skull.

There were some firm old adhesions between the opposed surfaces of the pleuræ on both sides of the chest. Upon the right side a very firm tough band connected the posterior part of the lung to the fifth rib for an extent equal in size to a shilling. Upon dividing the adhesion, it was found to limit a small abscess filled with well-formed pus, in which was a bit of dead bone exfoliated from the rib.

Both lungs, from apex to base, were infiltrated by small miliary tubercles, of a light grey colour, and semi-transparent. There were no cavities in any part of the pulmonary texture, and but the faintest trace in two or three spots of incipient tubercular softening.

The pericardium contained about half an ounce of clear yellow fluid. The heart was healthy.

Along the course of the ileum and cæcum there were numerous circular ulcers, with raised margins: some had nearly perforated the intestinal walls: they were all distinct one from another; none were confluent, even in the neighbourhood of the ilio-cæcal valve. The mesenteric glands were enlarged by tuberculous deposit. Upon raising the abdominal viscera from the contents of the pelvis, it was found that the lower part of the ileum was attached to the uterus by a firm band of adhesion.

The uterus was larger than natural (in its contracted state), and much elongated. The os uteri had sunk so low down in the vagina, that some little care was required to extract the organ entire from the pelvis. Under the peritoneal covering, which was transparent, there were seen innumerable yellow spots, closely aggregated, but distinct, and about the size of pins' heads. Both ovaries, somewhat enlarged, were occupied on their surface, and throughout their entire thickness, by similar yellow deposits. The right Fallopian tube, thicker than natural, was completely bent round to the posterior surface of the uterus, where the corresponding ovary was firmly adherent. The left ovary was adherent to the sigmoid flexure of the colon.

The os uteri looked swelled and patent. Upon pressing the organ there escaped from its interior a considerable quantity of yellowish-red, mucopurulent, bloody fluid. Upon laying open

the uterus and its neck, it was seen that the whole cavity was lined by a layer, several lines in thickness, of that opaque, yellow, cheesy tubercle; so often seen in the prostate gland or in the testicle. It readily admitted of being scraped off with the back of the knife, and left beneath it the proper structure of the uterus, rough and infiltrated throughout its whole thickness by similar deposits in masses of various sizes. The neck of the uterus, which felt to the finger when introduced soft, jagged, and torn, presented a large ulcerated or disorganised surface, covered by pus, softened tubercle, epithelium, and fragments of mucous membrane. It would, I think, have been impossible to diagnose by examination during life this condition of the uterus from that common cancerous ulceration.

The deposit, taken from different parts, was accurately examined under the microscope. It corresponded in every particular with the lowest form of tubercle. The greater part was composed of granular matter, soluble in liquor potassæ. Amongst the granules there were a few imperfectly formed cells, small in size, filled with granules, and presenting a faint trace of a nucleus.

The liver, pancreas, and other organs, were healthy.

I have related this case in full, as regards the post-mortem examination, because it appears to me to illustrate two important points: 1. The nature of this yellow, cheesy deposit; 2. The different characters of the ulcerations affecting the neck of the uterus.

Although this yellow deposit is described by most writers on morbid anatomy as true tubercle, there are some who, when they meet with it in particular organs, such as the testicle, surrounded by a soft, semi-fluid, creamy matter, are apt to pronounce it "cancer." The co-existence of tubercle in its well-known forms in the lungs, intestines, and mesenteric glands, and the result of the microscopic examination, clearly indicate, in the case here related, the tuberculous character of the uterine disease. It is true that, in the present state of knowledge, the means of cure are not more promising in one case than in the other; but the proper recognition of any morbid change of structure can never be a matter of indifference: cancer and tuberculosis do

not pursue the same course; they are not influenced by the same treatment, nor do they destroy life in the same way.

Tuberculosis of the uterus is a disease but rarely mentioned in systematic works. Rokitansky adverts to its infrequency as contrasted with the occurrence of the same affection in the prostate.* Louis relates one case similar in essential points to the one I have here detailed:—"A female died with the usual symptoms of phthisis. Upon examination it was found that both lungs were occupied by semi-transparent grey tubercles: there were tubercles in the peritoneum, and some inconsiderable ulcerations of the small intestines. The interior of the uterus and the upper half of the neck were of dull yellowish-white colour, with uneven surface: this was caused by the transformation of the superficial layer into firm tuberculous matter about a line in thickness. Beneath this there were numerous milary granulations of the same nature; the remaining portions of the parietes were free from alteration."

Similar observations have been made by Andral, Meckel, Düntzen, and others; but the works of all bear witness to the infrequency of the disease in this particular organ. I may observe that this statement receives confirmation from the results of the examinations in St. Bartholomew's Hospital. Dr Kirkes informs me that no instance of a similar morbid change has yet been recorded. It seems to me that "tuberculosis of the uterus" is the early stage of that "rare uterine disease," a specimen of which Dr. Ramsbotham exhibited at the Pathological Society, November 16, 1846. "The disease seems to consist in ulceration of the whole or chief part of the lining membrane of the uterus, under which the parietes of the organ become softened in structure, much as they do in pregnancy, and generally irregularly thinned in substance; while the cavity is considerably dilated, and contains coagula, unhealthy fetid pus, and portions of shreddy fibrin, which adhere with greater or less tenacity to the internal surface." Dr. Ramsbotham knew of only three similar recorded cases in English medical literature; one by the late Dr. John Clarke, another

* Louis on Phthisis, by Cowan, p. 256, 1835.

by Mr. Coley, late of Bridgnorth, and a third reported by Dr. Gooch.* The softening of the walls of the uterus by tuberculous infiltration; the lining of its whole internal surface by an exudation of similar character; its softening and disorganisation, which, commencing at the neck, would soon spread over every part of the interior of the organ; the dilatation of its cavity, and the collection of a large quantity of unhealthy discoloured pus, point out, I think, in the case before us, its affinity with Dr. Ramsbotham's "rare uterine disease." The occasional perforation of the uterine parietes, as in the cases of Drs. Ramsbotham and Clarke, can be best explained upon the supposition of tuberculous softening. The disease may be confined to the uterus and its appendages, in the same way as it may be confined to the testicle, or to the prostate gland; but usually other organs become involved: in the present instance both the alimentary canal and the lungs were secondarily affected.

A CASE OF MERCURIAL POISONING CAUSED BY CAUTERIZATION OF THE CERVIX UTERI WITH ACID NITRATE OF MERCURY. BY DR. LAFORGUE, OF TOULOUSE.

MME. C—, aged fifty-four years, of a feeble constitution and highly nervous temperament, suffered for several months from profuse menorrhagia. Astringents of all kinds were tried without avail. On examination, the cervix uteri was found to be the seat of ulceration, and of scirrhus alteration of its structure. Hæmorrhage followed the examination. Cauterization appeared to M. Leforgue the suitable means of arresting the progress of disease. The first cautery was effected with nitrate of silver, and was attended with benefit. Subsequently the nitrate of mercury was employed as being more energetic, and was not followed by any bad results. A second application of this caustic was made with every precaution. Two hours afterwards the patient complained of general indisposition. Serious symptoms soon showed themselves, as vomiting, pain, frequent stools, tenesmus, pain in the hypogastrium, and fever. The neck of the uterus and the vagina were in no pain, nor was there any hæmorrhage. Opium was administered, and the patient was relieved. In a few days inflammation of the mucous membrane of the mouth occurred. These symptoms of mercurialization subsided several days after.—*L'Union Médicale.* x

* Lancet, vol. ii. 1846, p. 588.

ON THE
CURE OF EPILEPSY,
BY THE EXPRESSED JUICE OF THE COTYLEDON UMBILICUS.

BY THOMAS SALTER, F.L.S., F.R.C.S.
Fellow of the Royal Medical and Chirurgical Society.

A CONSIDERABLE time has now elapsed since you did me the favour to publish my paper on the employment of the juice of the Cotyledon Umbilicus for the cure of epilepsy.

From inquiries that have been addressed to me on the subject by professional men in different parts of the country, I have reason to believe that it is pretty extensively used; and, in the opinion of some of my professional friends who have employed it, it is thought to possess decided anti-epileptic virtues.

In venturing to introduce this new remedy to the attention of the profession, I was desirous to speak of it modestly, and as a medicine yet to be tried. Still, my own experience of it at that time was such as strongly to impress on my own mind the opinion that it was likely to prove a remedy of considerable value. At any rate, I felt justified in recommending a trial of it to my professional brethren.

Notwithstanding the present advanced state of anatomical, physiological, and pathological science, epilepsy is still an obscure and occult disease; as, indeed, are most of the affections of the nervous centres. We know, indeed, many of its subordinate and exciting causes, some of which are widely different in their nature, but we are yet unacquainted with its primary or essential cause: hence our treatment remains to a considerable extent empirical. In these difficult circumstances it would be unreasonable as well as unphilosophical to expect always to succeed in its cure: a moderate amount of success must be considered a great boon. Many cases, I have no doubt, will prove, from their nature, incurable,—such as, from long continuance or severity of the disease, have led to much organic change, or such as arise from the continued operation of an exciting cause in itself incapable of being removed.

I have much pleasure, however, in being able to add that I have received accounts of its usefulness from others, and

it affords me still greater pleasure to forward to you the two accompanying successful cases, as having occurred in my own practice since my last communication to you. With respect to cotyledon itself, I am still in the habit of recommending the fresh expressed juice where it can be obtained; but as this is out of the reach of many persons, and of all for at least six months in the year, I avail myself of this opportunity to say, that I believe the liquid concentrated extract prepared by Mr. Hooper is of equal value.

In concluding this communication, I think it right to observe that I have uniformly recommended that great attention should be paid to the general health; and I have been in the habit of laying down a system of dietetics and exercise in accordance with the physical condition of the patient. With few exceptions, I have thought it right to recommend the disuse of fermented liquors, and I have advised my patients to employ tepid sponging during the winter months, and cold sponging, or the shower-bath, in the summer.

From the advantage that might be expected from sustaining a proper temperature upon the surface of the body, and preventing congestion of the vital organs, more especially of the brain, I have also deemed it important to attend to the subject of clothing: my patients have therefore been desired to wear flannel next to the skin. I have reason to believe that the patient whose case is the second here narrated paid great attention to these regulations, but I have not the same reasons for thinking that in the case of Lampport they were much observed. I have therefore concluded that the advantage obtained by him may be considered as due to the cotyledon alone.

CASE I.—Joseph Lampport applied to me on the 25th of October, 1849, for the cure of epilepsy. He is a stout, well-made young man, of a florid complexion, 22 years of age, five feet ten inches high, by occupation a gardener. He has been the subject of epilepsy for the last five years: his fits are of frequent occurrence: they sometimes take place as often as twice in the day: a month appears to have been the longest interval that he has experienced between the attacks, but of late they have been more frequent than formerly. He states that they come on without any

warning; he is insensible from ten minutes to half an hour: on recovering, he is sometimes sick and vomits, and suffers from weakness and headache, but in a few hours he feels quite well again. His appetite is good, bowels regular, and pulse natural. He was directed to take one drachm of Hooper's fluid extract of cotyledon in water twice a-day, and an occasional dose of compound rhubarb pill if the bowels required it. He has continued the medicine pretty regularly up to the present time (May 7th). The benefit he experienced was strikingly marked from his first taking it. He has had no fit for the last three months, and is in every respect at the present time quite well.

CASE II.—On the 21st of October, 1849, I was consulted by a gentleman of about 20 years of age, who had been for some time the subject of epilepsy; but, from the fits hitherto occurring in the night, it was not known precisely how long he might have laboured under the disease. However, about six months since, previous to my seeing him, from the attacks occasionally occurring in the day-time, the complaint was detected. His parents had, however, for a long while suspected that something was the matter, from his sometimes not rising at the usual hour in the morning, and afterwards from his appearing dull and stupid during the day. Moreover, he had often been heard to make strange noises in the night; but, as he had been known to suffer from what is called nightmare, the circumstance did not give rise to the suspicion that he was affected with any serious disorder. This being once ascertained, his bed-room was changed, so that he might be within hearing of his mother.

The intervals between the attacks after this period varied from two to three or four weeks. Occasionally he had only one fit: at other times he would have four or five in succession in the course of one night. I now found on inquiry that he generally knew when the attacks were about to come on, from a peculiar feeling in his left arm and hand which took place the day previous. This was an uneasiness, scarcely amounting to pain, yet clearly allied to it: there was a feeling of stiffness, and an awkward inconvenience when it was moved; a crampy feeling, with occasional twitches of the muscles, and con-

traction of the fingers, together with some numbness; but he was not aware of any *aura* before the attack. The patient was of small stature, of a nervous and irritable temperament, and considered to be weakly rather than otherwise, but had, notwithstanding, enjoyed good health. The appetite was good; the bowels were disposed to constipation. Before he was put upon a regular course of medicine for the relief of the epilepsy, I thought it right, in the first place, to clear the bowels, and to observe if any common source of irritation existed that might be thought directly or indirectly to have occasioned the fits. He was ordered to take a sufficient quantity of compound rhubarb pill to keep up a full action on the bowels, and to leave off suppers, of which he was accustomed to partake largely. But as the fits continued, and it was suggested that he might possibly have worms, he took at intervals of two or three days several doses of turpentine at night, followed by castor oil in the morning, and on one occasion a large lumbricus was passed. But this treatment had no effect in diminishing the paroxysms; on the contrary, they were thought to be decidedly more violent, particularly on one occasion,—the day following the use of the turpentine. On April 21st he was put upon the use of the cotyledon, and ordered to take a fluid ounce of the recent expressed juice of the plant twice daily. In the month of June, from the scarcity of the plant, he commenced the concentrated extract, as prepared by Mr. Hooper, which he continued up to September the 9th, about which time the fits left him, and have not since occurred, having previously gradually declined in frequency and severity. He continues now in good health; but, by his own desire, he still takes the cotyledon as a prophylactic.

Poole, May 18, 1850.

EFFECT OF MENTAL IMPRESSIONS ON THE OFFSPRING OF ANIMALS.

THE Earl of Morton, being desirous of obtaining a breed between the horse and the quagga, selected a young mare of seven-eighths Arabian blood, and a fine male of the latter species, and the produce was a female hybrid. The same mare had afterwards, first a filly and then a colt by a fine black Arabian horse. They both resembled the quagga in the dark line along the back, the stripes across the forehead, and the bars

across the legs. In the filly the mane was short, stiff, and upright, like that of the quagga; in the colt it was long, but so stiff as to arch upwards, and hang clear of the sides of the neck. In other respects they were nearly pure Arabian, as might have been expected from fifteen-sixteenths of Arabian blood. The second case is analogous, but it occurred in the pig:—D. Giles, Esq., had a sow of the black and white kind, which was bred from by a boar of the wild breed of a deep chestnut colour: the pigs produced by this intercourse were duly mixed, the colour of the boar being in some very predominant. The sow was afterwards bred from by two of Mr. Western's boars, and in both instances chestnut marks were prevalent in the litter, which in other instances had never presented any appearance of the kind. The third we shall quote is thus given:—A cow, the property of Mr. Mustard, of Angus, chanced to come in season while pasturing in a field which was bounded by that of one of his neighbour's, out of which an ox jumped, and went with the cow until she was brought home to the bull. The ox was white, with black spots, and horned. Mr. Mustard had not a horned beast in his possession, nor one with any white on it: nevertheless, the produce of the following spring was a black and white calf with horns.

We select one other case, and in another animal, namely, the dog:—On one occasion, when the late Dr. Hugh Smith was travelling in the country, accompanied by a favourite female setter, she became suddenly so enamoured of a mongrel that followed her, that, to separate them, he was forced, or rather his anger irritated him, to shoot the mongrel. The image of this sudden favourite, however, still haunted the bitch; and for some weeks after she pined excessively, and obstinately refused intercourse with any other dog. At length she admitted the caresses of a well-bred setter; but, when she whelped, the Doctor was mortified with the sight of a litter which he perceived bore evident marks (particularly in colour) of the favoured cur, and they were accordingly destroyed. The same also occurred in all her future litters: invariably the breed was tainted by the lasting impression made by the mongrel. The latter two cases, and many similar ones which might be related, particularly in the dog, would seem to show that mental impressions received at the time of oestrus are of themselves sufficient to stamp the progeny. Be this as it may, each has a practical bearing, which he who looks to the preservation of the purity of a breed will not fail to profit by.—J. B. Simonds, in *Veterinary Record*.

MEDICAL GAZETTE.

FRIDAY, JUNE 14, 1850.

WE are glad to perceive that the members of the Government are earnestly exerting themselves to carry forward the great sanitary measure of the session,—namely, the METROPOLITAN INTERMENTS BILL. It has been generally supposed that the great opponents of the measure were the clergy; but the recent debates in the House of Commons have shown that there is another and a more formidable class of objectors—namely, the *undertakers*. The question, as we are disposed to deal with it in this journal, is one of a sanitary and not of a political nature. All that concerns us is its immediate bearing on the state of public health. That the burial of the dead at a distance from crowded streets and inhabited thoroughfares, and in places which will really hold the bodies that are carried to them, would be a most important improvement of the present system, is not denied even by the undertakers and their Parliamentary advocates; and, if the Government would only allow these sable gentlemen to make their *ad libitum* charges for palls, crape, plumes, &c., as heretofore, it is to be inferred from the speeches on the subject that this branch of opposition would be at once cut off. How does it happen, however, that the men who, for the sake of the undertakers, would still retain the injurious practice of intramural interment, and who claim for them the benefit of vested interests, and the right of competition in extortionate charges for palls, crape, and plumes, &c., are violently opposed to the concession of any compensation to the clergy? It is a curious fact that, while the clergy of the metropolis have

not been able to procure *one member* to speak in their favour, the undertakers have been able to command the services of the majority of the metropolitan members, and by their aid to throw all sorts of idle objections in the way of this measure. It would not be difficult to show that there is a very close alliance between undertakers and publicans, and between the latter and the ten-pound voters of boroughs. Is it owing to this indirect influence, that metropolitan members, who have scarcely been seen in the House of Commons during the session, have recently in a body rushed to the rescue of the undertakers, and have earnestly endeavoured to preserve to them their right to exact any sum they please from those who, in the hour of sorrow and desolation, are compelled to call for the services of these harpies? We shall leave our readers to draw their own inference from the facts.

It is idle to talk of agreeing to the *principle* of extramural interments, and at the same time opposing the *necessary details* for ensuring the efficiency of such a measure. If some of the metropolitan members had their way, no such measure could be passed into a law; for not one of them has suggested what was even a consistent or reasonable substitution for the Government bill. Any measure of the kind must be taken as a whole, and not cut to pieces according to the fancy of dilettanti legislators, for the benefit of the publican and undertaker interest. Such proceedings, if successful, would indefinitely postpone one of the most important steps in sanitary improvement which have been made in modern times. Let the metropolitan members, who have been foremost in this opposition, consider themselves as members for the sanitary interests of *two millions* of persons cooped up within the area of the metropolis, and not as mere delegates for the expression of the opinions of ten-pound

borough voters, who, with their friends, the undertakers and publicans, constitute only a fractional part of this great community. It is a convenient fiction to suppose that the members of the metropolitan boroughs, in their present opposition to the Metropolitan Interments Bill, are representing the views of a majority of the inhabitants; but, if the wishes of those who have no pecuniary interest in the maintenance of a gross abuse were consulted, it would, we believe, be found that the opponents of the measure really constitute an insignificant minority. The manner in which the Government is supported shows that the undertakers are vainly struggling to defend a lost cause. The battle must be fought in the House of Commons: they will meet with no popular sympathisers in the House of Lords; and we expect to find one curious feature in the success of this piece of sanitary legislation—namely, that the inhabitants of the metropolis will have the benefit of it, by reason of the strenuous exertions of country members, and in defiance of the opposition of those who affirm that they represent the sense, intellect, and wealth of London, and who ought to protect the interests of the whole population.

THE permission of the House of Commons has been already asked and obtained for the introduction of a bill for taking an account of the population of Great Britain in 1851. The day fixed is the 9th of June of that year. The following details respecting the census were entered into by Mr. C. Lewis:—

“ Since 1801 it had been the practice to take accounts of the population at periods of ten years. The census of Great Britain was taken in 1801; that of Great Britain and Ireland in 1811; and the accounts for both had, since then, been taken decennially up to 1841 inclusive. Before that year the census

was taken by the parish overseers, but in that year it was taken by the registrar. In the next year, 1851, it was proposed to make use of the same machinery that was employed in 1841, the only difference contemplated being that it should be taken under the general control of the Secretary of State, the Secretary of State appointing such persons as might be found best fitted for fulfilling the immediate office of making the returns. At the last census three commissioners were appointed, the Registrar-General and two others. It was proposed that, on the ensuing occasion, a more economical arrangement should be made. The expense of the last census was about £29,000 for the central office, and about £70,000 for the enumeration; or, together, rather more than £100,000. In 1841 this expense was divided between the national exchequer and local funds, the parishes paying for the enumeration, and the exchequer defraying the cost of the central office. The bill he now asked leave to introduce proposed that the funds advanced by the parishes for enumeration should be repaid by a parliamentary grant, so that the whole of the expense of the census of 1851 would fall on the national exchequer, and no part of it on local funds. The bill applied only to England and Scotland: there would be a separate bill for Ireland.”

It would be desirable on this occasion not merely to distinguish the respective numbers of the sexes, but the numbers living at different ages in quinquennial periods, and, so far as it can be ascertained, the profession or occupation of each adult. A carefully made return on these points would have an important bearing on vital statistics.

THE most sanguine medical reformer can scarcely expect that in the remaining six weeks of the Parliamentary session, with the great pressure of public business, there will be time for the Home Secretary and the Lord Advocate to prepare and lay before Parliament a bill for the regulation of the medical profession. It has been reason-

ably suggested by these gentlemen that it is desirable to know the sentiments of the majority of medical men before undertaking the task of legislation. One of our contemporaries has made the laudable attempt to procure something like precise information on this difficult subject by issuing balloting papers, containing *two* questions, to be answered by "all legally qualified members of the medical and surgical profession residing in England and Wales—namely:—

1. "Whether the Charter of the Royal College of Surgeons of England should be so amended as to admit practitioners in medicine, surgery, and midwifery, to seats in the Council of that College, on the principle of representation?—or, 2. Whether the practitioners in medicine, surgery, and midwifery, should be incorporated in an independent College, on the principle of representation?"

Each "*legally qualified*" practitioner is invited to return the paper with an answer, "Yes," or "No," to either question, before the 15th instant.

Such a scheme for collecting the views of the profession is, we fear, not likely to lead to any practical results. The fact that only "*legally qualified*" members of the profession are expected to sign the papers, or to have their views consulted, would at once exclude a large number of practitioners in London and the provinces who are graduates of the Scotch, Irish, and foreign universities, and have no other qualification.* If their votes were taken they might be fairly objected to by the advocates of the losing question as not those of legally qualified men: if not taken, Sir George Grey and the Lord Advocate might consider that the votes had been only partially collected; and, therefore, that they did not represent the views of British medical practitioners. We apprehend that the Minister is inclined to

look to the opinions of the profession generally in the United Kingdom, and not of those members of it only who are legally qualified to practise in England and Wales, or who may be residing in this part of the kingdom. Scotland and Ireland must have a voice in any Medical reform measure; and for this the balloting papers do not appear to provide.

Other difficulties suggest themselves,—namely, that the return of the paper by each member is optional, and therefore a matter of very great uncertainty: one name may be easily substituted for another: there is no check upon fictitious voting, or the substitution of the names of dead practitioners for those of living unqualified pretenders. In short, there is no guarantee that the returns can be, under any circumstances, accurate. Tricks of all kinds, it is well known, are put in force at Parliamentary elections; but the administration of an oath has some check upon the amount of fraudulent dealing. There is no such check in this case; nor can the genuineness of any signature be determined by any known test. How, therefore, can these balloting papers serve to guide Sir George Grey to a safe conclusion on the general sentiments of the profession? Besides, it appears to us that the first question proposed is much too wide in its scope. The admission of practitioners in medicine, surgery, and midwifery to seats in the Council of the College of Surgeons, is surely not the *only* question affecting the amendment of the charter. This has, indeed, been practically conceded by the late resolutions of the College. The real question now at issue does not appear to us to be clearly stated. The alternative now offered to the profession, as we understand it, is this:—Whether the Charter of the College shall be so amended as to admit practitioners in *pharmacy, and dispensers of medicines*

* See MEDICAL GAZETTE, p. 867.

for profit, to seats in the Council of the College of *Surgeons*, or whether there shall be a new and independent College to incorporate practitioners in medicine, surgery, midwifery, and *pharmacy*? The College have conceded the point to men who have ceased from practising pharmacy for a period of five years. A man may *then* become a fellow, and take his chance of acquiring by his merits a seat at the Council. They deny this privilege to one who now practises pharmacy, although "practitioners in medicine, surgery, and midwifery," are eligible to the Fellowship, and therefore to the Council. The alternative is not fairly put: it is the pharmaceutical practice which constitutes the great objection to admission on the part of the College; and we really believe that the majority of the profession would put a veto on the proposed foundation of a new College, if no better argument could be adduced in its favour than that the Royal College of Surgeons refused to admit to its Council, those among its members who practised pharmacy.

PHTHISIS PULMONALIS.—USE OF COD-LIVER OIL BY DR. REESE.

THE advanced period of tuberculous phthisis, in which most of our patients reach the hospital, affords but slender encouragement from medication. In those, however, with whom any rational hope could be indulged from treatment of any kind, the cod-liver oil has been frequently and extensively employed, and many of the patients have improved under its use, and been discharged from the hospital, so that their subsequent history could not be traced. The apparent effects have been an improvement in the appetite and strength: diminution of cough, expectoration, diarrhoea, and night sweats, with the establishment of regularity in the alvine evacuations; but further experience will be required to estimate accurately the powers of the remedy. The crude and clarified oils have both been tried, though preference is given to the latter. From a teaspoonful to a tablespoonful has been given three times a day.—*American Journal of Medical Science*, 1850.

**LECTURES
ON THE
TREATMENT OF DELIRIUM AND
COMA;**

(IN SEQUEL TO THE LUMLEIAN LECTURES
FOR 1850.)

Delivered at King's College Hospital,

BY R. B. TODD, M.D., F.R.S.

(Reported by Mr. LIONEL S. BEALE, Med. Associate K.C.L.)

Recapitulation of the conclusions arrived at in the Lumleian Lectures—Delirium and Coma not inflammatory in the vast majority of cases—Congestion not a cause of delirium or coma—Diagnosis of the different forms of delirium—Assisted materially by the fact of the rarity of inflammation of the brain in the adult—The few cases in hospital practice—also in the Registrar-General's reports—Symptoms of inflammation of the brain—Diagnosis of the various forms of non-inflammatory delirium from each other.

GENTLEMEN,—I have lately been giving, as most of you are perhaps aware, some lectures at the College of Physicians, on the subject of delirium and coma. In these lectures I have endeavoured to collect and arrange the most important facts in the clinical history and morbid anatomy of these diseases; and from these premises, with due attention to certain points in the physiology of the brain and nervous system generally, it has been my object to deduce conclusions with respect to the intrinsic nature of delirium and coma; or, in other words, to frame a reasonable view of the pathology of those affections.

The conclusion at which I arrived in these lectures was, that, in the vast majority of cases, delirium and coma essentially depended upon different degrees of derangement of the nutrition of those parts of the brain, which may respectively be called "the centre of intellectual action and the centre of sensation." It may, indeed, be said that these symptoms are produced by different degrees of *poisoning* of the nervous matter which constitutes these centres, whereby their normal action is disturbed. If the poisoning occurs only to a certain extent, delirium is produced; but if to a greater extent, coma will result. Thus if you notice the effects of alcohol upon the system, as we have too many opportunities of doing, you will observe that when the alcoholic potations are limited to a certain

point, delirium occurs, the person becomes loquacious and merrily drunk; but if a larger dose of the poison (as it must be called) be imbibed, he becomes stupidly, or, as it is frequently termed, "beastly drunk;" or, in more scientific phrase, *comatose*.

You have also frequent opportunities of observing these two degrees of the operation of the same poison in patients to whom chloroform is administered prior to surgical operations. After a few inhalations, the patient becomes delirious, talks incoherently, laughs very much, and offers considerable resistance when attempts are made to hold him. In a short time, however, if the administration of the chloroform be continued, all resistance ceases, the muscles become relaxed, and the patient lapses into a state of profound insensibility or coma; and that coma will become more profound the more chloroform you give, so that death may be caused by its continued administration.

In several constitutional affections the brain suffers in its nutrition, or its healthy functions are interfered with by the influence of various morbid poisons: of this we have examples in the frequent occurrence of delirium and coma in typhus fever and the exanthemata, in erysipelas, rheumatic fever, and gout, in epilepsy. Hence I was led to describe the various forms of delirium and coma under the respective names of typhoid, of rheumatic, of gouty, of erysipelatous, of epileptic delirium and coma, &c. These various forms of delirium and coma resemble in all essential points those which may be brought on by the introduction into the system of such poisons as alcohol, opium, and the whole class of narcotic poisons, &c. From this we may infer, that a morbid matter, generated in the human body, or communicated from one person to another, as the poison of typhus, of the exanthemata, of erysipelas, &c. may disturb the centres of intellectual action and of sensation; these poisons having a special affinity for those centres; as Flourens suggested that some of the narcotic poisons exercise primarily a special influence on particular parts of the brain; as belladonna, which causes blindness and dilatation of the pupil, by acting primarily on the centre of implantation of the optic nerves; alcohol, which impairs the power of the co-ordination of movements, by affecting the cerebellum; or opium, which causes contraction of the pupil, by exerting its particular influence on the centre in which the third pair of nerves is implicated.

Again, Dr. Percy has shown by chemical analysis, that, in cases of poisoning by alcohol, the brain contains more of this stimulant than any other texture in the body; so that it would appear that the

nervous matter exercises a particular attraction for this substance, and has a greater power of separating it from the blood, than any of the other tissues.

Whatever theories we may adopt with respect to the causes of delirium and coma, clinical examination clearly shows that, in the vast majority of cases, there is no evidence that they arise from any inflammatory state of the brain. I should say, speaking very roughly, that, of twenty cases of delirium or coma, one might depend upon inflammation; for one case depending upon inflammation, you have nineteen others arising from causes of a non-inflammatory character; in other words, for every hundred cases of delirium and coma, which you meet with, not more than five will be inflammatory in their nature. And it may be further deduced from the facts of the clinical history which I have collected, that congestion takes no part in the production of delirium or coma—congestion, that state to which many are so prone to ascribe the most various, and even opposite affections of the brain. If a man be giddy, the giddiness is said to depend upon congestion; if he has a headache, the pain is referred to the same cause; if he be delirious, congestion is the cause; if he be comatose, it is because the brain is congested. Nor has any advocate of this view, so far as I am aware, ever attempted to explain, what seems an obvious contradiction, namely, how a raving delirium may be caused by the same pathological condition (congestion) which would produce an apoplectic coma.

Undoubtedly, as I have before observed, in the vast majority of cases we shall find that delirium and coma are not produced by an inflammatory or by a congested state of the brain; it must, however, be borne in mind, that now and then we do find that inflammation of the brain or its envelope does cause delirium or coma, though these cases are indeed few when compared with the number of cases which cannot be ascribed to such a cause. When the practitioner is called upon to treat a case of delirium or coma, he must first solve the problem, whether, in this particular case, the symptoms are dependent upon inflammation of the membranes or substance of the brain, or whether it is produced by a peculiar condition of the system not in any way connected with inflammation.

At the College of Physicians I was unable, from the great extent of the subject, to enter at length on the consideration of the treatment of these diseases, and I therefore propose to discuss that part of the subject here in the present and two or three other lectures, and to illustrate my remarks by reference to such cases as may occur to us.

Before, however, I speak of the treatment of the various forms of delirium and coma, it will be necessary that I should occupy a little time with some remarks upon the subject of the diagnosis,—not only of each form of delirium or coma from the others,—but especially of the inflammatory from the non-inflammatory forms of delirium and coma.

In this latter diagnosis, it is plain that we derive great aid from the clinical fact to which I have already alluded; namely, that the vast majority of cases of delirium and coma are clearly not dependent upon any inflammatory process in the brain—upon any process which leads to the formation of lymph or pus, or to the ultimate disorganization or total destruction of the tissues affected.

And we derive further help, in the diagnosis, from the fact (which, I think, cannot be doubted), that inflammation of the brain (whether of the membranes or of the cerebral pulp) is a rare disease, excepting in quite young children. It is seldom met with, both in hospital and in private practice, excepting at those early periods of life when it is associated with a strumous state of constitution.

Many of you have been attending the wards of this hospital, with the most laudable regularity, for the last twelve months or more, and you must have remarked how rarely does delirium or coma occur in consequence of inflammation of the brain, compared with the great number of cases of the same affections which result from other causes. Looking back to my case-books for the last ten years, I am surprised at the small number of cases of inflammation of the brain which I am able to collect. The reports of the Registrar-General also lead to the same conclusion, and tend to show how rare are cases of inflammation of the brain. These cases are classed in the reports under the term *Cephalitis*: a term which, although not free from objection, has at least the recommendation of being comprehensive, for it is applicable to inflammation of any or all the textures which form the head. Seeing, then, the comprehensive nature of this term, we may expect that all cases having any pretension to be called cases of inflammation of the brain or of its membranes, are included in the report.

Now the cases of cephalitis are very few in number. The first week in January during a series of ten years, from 1840 to 1849, gives a maximum of 16, and a minimum of 9, deaths from cephalitis, the average being 11 per week, in a population of two millions, and with an average mortality of about 1100. In the third week of the same month, during the same ten

years, we find just the same weekly average; and at later periods of the year there is little or no difference as regards the number of deaths from cephalitis. I think, moreover, that the number of deaths from cephalitis already mentioned may be taken as perhaps representing more than really do occur from that cause, for there is a decided tendency to refer symptoms to inflammation, and there is an undoubted fondness for the termination “itis” in the nomenclature of disease. We may therefore assume that cephalitis is often said to kill people, when really there has been no inflammation at all, and that the reports are more likely to exhibit an over- than an under-statement of the cases of cephalitis. If, moreover, we remember what a fatal disease inflammation of the brain is, we may infer that, all things being considered, we may derive from the reports of the Registrar-General a pretty accurate account of the actual number of cases of cephalitis which occur in each week, among a population peculiarly exposed to causes likely to disturb the brain.

Hence, then, there being the strongest reasons for concluding that inflammation of the brain is a rare disease, we are justified in holding the opinion that delirium and coma, in the vast majority of instances, are non-inflammatory affections, but that occasionally they depend upon, or are associated with, inflammation of the brain.

What, now, are the symptoms which, in any given case, would lead us to affirm that the patient is suffering from inflammation of the brain? I shall enumerate these symptoms in the order of their frequency and importance.

The first symptom which I shall mention, because it is of very frequent occurrence, and ought to excite very strong apprehensions in the mind of the medical attendant, is *nausea and vomiting*. It comes without any assignable cause; sometimes the patient vomits without any previous warning, and quite irrespective of any food he may have taken into his stomach, or of any previous derangement of his digestive organs, or, indeed, of any previous marked disturbance of the general health.

Secondly, we meet with pain in the head as a very frequent symptom, which, however, exhibits a good deal of variety in its characters. Sometimes it is acute, and fixed in its situation; at other times dull and indefinite. It is more intense and better marked in proportion as the disease is seated nearer the surface. It is most intense in inflammation of the dura mater, less so in inflammation of the pia mater, and least severe in inflammation of the cerebral pulp. When the inflammation arises from a syphilitic taint, the dura

matter is very frequently affected; and in such cases the pain in the head is not uncommonly accompanied by a tenderness of the pericranium in the position of the pain.

Thirdly, sluggishness of the pulse is a frequent accompaniment of even the most intense inflammation of the brain. The pulse may fall as low as 50, or even 40, or it may continue to beat at the rate of 60 or 70. It may be sluggish without being particularly slow. The artery strikes in a heavy sluggish manner, not rapidly or sharply, but conveying the sensation as if it impressed a larger surface of the finger than usual. Generally, however, in cases of inflammation of the brain, the pulse is both slow and sluggish, and the heart's action heavy, the beats not succeeding each other rapidly.

Fourthly, we have delirium tending to coma. In inflammation of the brain the delirium is generally of the low and muttering kind. You seldom or never have wild frantic delirium when there is inflammation of the brain. The descriptions given by systematic authors of what is called *phrenitis*, appear to me to have no foundation in clinical study—at least, if that affection be regarded as a form of inflammation within the cranium. In inflammation of the brain there is, along with the delirium, a more or less comatose state, which gives to this form of delirium a close resemblance to that which comes on in typhus fever. Indeed, some cases of inflammation of the brain so much resemble typhus fever, that it is exceedingly difficult, or quite impossible, to distinguish between them, until the disease is so far advanced as to afford some special characteristic symptoms. As an instance of this I will relate a case which occurred in the hospital last March.

A woman, about forty years of age, of fair complexion, with red hair, was brought up from the surgical wards on the 8th of March, apparently suffering from typhus fever. The tongue was dry, and covered with a brown fur, the pulse rapid and weak, beating 120 in a minute, and there was great prostration, so that she was ordered stimulants; and in still closer resemblance to typhus or typhoid fever, she had severe diarrhoea, with a tympanitic state of the abdomen. She was now in a heavy stupid state, and could not give any satisfactory account of herself.

The next day delirium of a low and muttering character came on; she passed her motions under her, and complained of great thirst and headache, which was not distinctly referred to one point of the head.

On the 10th she continued much the same, muttering, delirious, and comatose. The pulse now became sluggish, and fell in

frequency. This symptom, with the continuance of the delirium, unaffected by stimulants, which generally exercise a beneficial influence in the delirium of typhus, excited my suspicions of inflammation within the cranium. The head was ordered to be shaved, and cold applied; and the stimulants were diminished to one-half. Such was the prostration, that I did not like to withdraw them altogether. The next day the pulse became still slower; a very marked paralytic state supervened; the tongue was protruded to the right side; both pupils were dilated, but the left much more so than the right. Soon afterwards a decided paralysis of the right arm and leg, accompanied by a rigid state of the muscles of the arm, occurred, the coma came profound, and she died in the evening.

Upon a post-mortem examination being made, a large quantity of loose flaky lymph was found effused into the arachnoid sac of the left side, covering the upper and inner surface of the left hemisphere, the left side of the falx, and extending on the outer surface of the hemisphere to the level of the base, but ceasing there abruptly, so that not the smallest particle of lymph was found on the arachnoid of the base. An accumulation of fluid had taken place in a cavity, circumscribed by lymph, on the outer side of the left ventricle, near the position of the fissure of Sylvius. The fluid which had accumulated here compressed the brain on the left side, and formed a complete depression on its surface. This was the cause of the paralysis with rigidity, of the right arm and leg.

I mention this case to show you the great difficulty of distinguishing a case of inflammation of the brain from one of typhus fever, before the disease has made a certain advance; and I must confess, that if a similar case were to occur to me again, I should find the same difficulty in forming my diagnosis.

The first symptom which led me to suspect inflammation of the brain, was the alteration in frequency of the pulse. On the first day it was 120, on the second 112, and it then fell to 50 or 60. The inequality of the pupils and the paralytic state very soon confirmed this suspicion.

Fifthly, I may notice *coma*, which generally accompanies or follows delirium, and which is a more constant symptom of inflammation of the brain than delirium. Delirium of the low muttering kind, passing readily into coma, without any evidence of diseased kidney, or of impediment to the excretion of any other gland, affords strong presumptive evidence of the existence of inflammation of the brain.

The last symptom to which I shall refer

as accompanying inflammation of the brain, is *paralysis*, which occurs under a great variety of circumstances as regards degree and locality. Occurring in connection with the other symptoms I have detailed, it is a sure indication of the presence of destructive disease within the cranium. It is obvious, however, that it must vary considerably in extent, according to the extent and position of the inflammation. You may have a slight paralysis affecting the levator palpebræ and some of the muscles of the eye-ball; or a hemiplegia, perfect or otherwise, but frequently exhibiting a more or less contracted state of the muscles of the paralytic limbs.

The paralysed limbs are sometimes affected at intervals with epileptiform convulsions, more especially when the inflammatory process is seated on, or very near, the surface of the brain. In rare instances, in young subjects, such partial convulsive movements may pass into general convulsions: otherwise, I apprehend that general convulsions cannot be regarded as a feature of the clinical history of inflammation of the brain.

Thus, then, that form of delirium which is accompanied with nausea or vomiting, pain in the head, or a slow sluggish pulse, and has an obvious tendency to the comatose state, or passes quickly into coma, and especially when accompanied or succeeded by paralysis, may be justly viewed as having its origin in inflammation within the cranium, more especially when there is no evidence of disease of the kidney.

Excluding the delirium which originates in inflammation of the brain, the diagnosis of the other forms of delirium from each other is comparatively simple, certain salient points in the history of each affording generally obvious indications of the nature of the delirium. On these points I shall touch when I describe the treatment of each form of delirium or coma; to which subject I shall proceed in my next lecture.

ANATOMY OF A MONSTER OF THE GENUS RHINOCERPHALUS. BY MM. ROBIN AND DAVAINÉ.

THE following chief particulars were pointed out by MM. Robin and Davainé to the Société de Biologie, in a case which they had had an opportunity of examining:—1st. The two eyes were united in one orbit, and possessed only one common optic nerve. 2d. There was a complete absence of the inferior maxilla. 3d. The mouth formed a *cul-de-sac*, and contained no tongue. 4th. The absence of cerebral hemispheres, which were replaced by a single lobe, not covering the optic thalami or corpora quadrigemina. X

Reviews.

Rational Medicine; a Vindication: the Address delivered on the Opening of the New School of Medicine, Surgeons' Hall, Edinburgh, November 6th, 1849. By ALEXANDER WOOD, M.D., &c. &c. 8vo. pp. 88. Edinburgh: MacLachlan and Stewart. London: Churchill. 1849.

THIS is a very eloquent discourse, pointing out the legitimate objects of medicine, its limits, its high claims, its aspects, the means it places in our hands for the relief of suffering, and the scientific spirit in which it should be cultivated. The following extract will afford our readers a means of judging of the author's style, and of the elevated motives which he places before the student of medicine:—

"The scientific labourer and the mere artisan in our profession live and move in two different worlds. The one, in the phenomena with which he is daily conversant, sees only unconnected objects and insulated facts; the other beholds these harmoniously blended, and acting under laws uniform in their operation, and bearing the impress of the infinite wisdom by which they were planned. To the latter, the discoveries of the past become the germs of future progress, and he is redeemed from a slavery to power and authority, and elevated to an existence worthy a rational being. Nor are his studies the mere abstractions of mental pursuits; they are fraught with benefit not only to the immediate objects of his care, but to the whole human race. For he among you who will labour to follow his profession in the brighter light of a high philosophy, will not only give the surest earnest of his future success, but will be accomplishing the noblest end for which man can live and acquire learning—his own improvement, and the benefit of his kind." (p. 48.)

An appendix follows the discourse, containing observations having reference to the new school of medicine connected with the Surgeons' Hall in Edinburgh; remarks on the curability of consumption, being a reprint of a review of Dr. Hastings' work on Consumption, and the reprints of two reviews on the subject of Miss Martineau's cure by Mesmerism.

We find nothing in this appendix calling for special observation: we there-

fore conclude our notice of the work by commending it to the favourable consideration of our readers.

An Introduction to the Study of the Mind: designed especially for Senior Classes in Schools. By DANIEL BISHOP. Small 8vo. pp. 148. London: Longmans. 1849.

"THE writer believes that amongst all the labours of the learned, there is not to be found any work that develops *the laws which regulate the rise and succession of thought*! As a comprehension of these laws is to every human being of unspeakable consequence, whatever else was neglected, their elucidation, one might have expected, would have excited always and every where the profoundest attention. WHAT TO EVERY MAN IS OF SO MUCH IMPORTANCE AS HIS INTERNAL STATE? Were he ill at ease in his own bosom, though master of the world, it would be to him of little value. And conversely the consummation of every thing relating to it would not disturb him, were he in possession of the peace which passeth all understanding. This peace, mental philosophy assists us to attain. The aim of the writer is to develop the laws above-mentioned, as far as his abilities, and the limits he prescribes to himself, allow.

With the profoundest humility he hopes it will be attended by the Divine blessing."

With the utmost respect for the spirit of religion in which the author writes, and for the laudable intentions of the author, we nevertheless think that he has not distinctly observed the line of demarcation between religion and metaphysics, when he states it to be his opinion, that a science that has passed the comprehension of so many men in all ages, is necessary to the comprehension of that knowledge "which passeth all understanding," and which, in the words of its divine author, is hid "from the wise and prudent, and revealed unto babes."

Mr. Bishop's book presents a sufficiently extended sketch of the physiology of the senses, and of the history of the mental faculties, for the class of readers to whom his work is addressed. The high motives which he submits for their guidance in the study of the mind, and indeed in every other pursuit, claim

our warmest advocacy. His remarks are accompanied by well selected illustrations from the best writers in almost every department of literature; we therefore commend the work to those who have the charge and instruction of youth.

We may quote one passage, which will set before our readers an epitome of the author's teaching on the laws of human thought:—

"As the circumstances in which we are placed may be almost infinitely varied, so necessarily may be the thoughts thence arising and the trains which follow; and as the will is variously disposed, different trains may arise from the same idea being present to the understanding under similar circumstances. We must remember what has been elsewhere stated, that each mind has its own peculiar mode of connecting ideas. And that *the great law which regulates the rise and succession of thought*, in the mind of every human being from the cradle to the grave, therefore, as has also been said, is simply that of HABIT." (p. 134.)

This, however, as our readers will perceive, is merely a reproduction of the doctrine of the association of ideas, taught by Dr. Brown, and other metaphysical writers. We cannot, therefore, accord to the author the merit which he claims of originality in the development of the "laws of thought." We are, in fact, rather disposed to regard his work as an illustration of his law of Habit. The author has, we suppose, so long been accustomed to note down what has struck him as worth preserving from his metaphysical studies, that he has come to regard as his own, discoveries which have already been made by others.

This little volume may be regarded as a safe and useful guide to juvenile beginners in metaphysical studies.

CHLOROFORM IN NERVOUS ASTHMA.

M. LALOG relates a case of nervous asthma in which antispasmodics and various other medical agents had been tried with little success, in which the exhibition of chloroform gave instant relief whenever a paroxysm occurred, and seemed also to exert a beneficial influence on the disease itself, lengthening the intervals and diminishing the severity of the attacks. x

Proceedings of Societies.

PATHOLOGICAL SOCIETY OF LONDON.

DR. LATHAM, PRESIDENT.

May 26, 1880.

DR. PEACOCK exhibited some

Preparations illustrative of the Mode of Origin of Aneurisms of the Aorta.

These preparations consisted of three series:—

1st. The upper part of the descending aorta from a man, 29 years of age, who died from the rupture of a small aneurism into the left bronchus. In this preparation are seen two sacculi, each capable of lodging a pea, of a round form, but not very distinctly circumscribed.

2d. A portion of the right common iliac artery, removed from a man, 56 years of age, in whom there was an aneurism of the same vessel nearer the heart. The artery was considerably dilated, and immediately above its division there is a small shallow sac, about half an inch in diameter, bounded by a distinct margin below, but very imperfectly circumscribed above.

3d. Portions of the ascending aorta of a female, 48 years of age, who died of extensive laryngeal disease. In these preparations are shown four small sacs, all very distinctly circumscribed, and separated by comparatively narrow necks from the cavity of the artery. Two of the sacs are situated on the left side of the vessel, and of these, one is five French lines in diameter at its orifice, and about the same in depth. The other, which is situated below, and somewhat to the right of the first, is altogether smaller. The third and fourth sacs are situated on the right side of the vessel, immediately below the origin of the arteria innominata, and the largest of them has a diameter, at its orifice, of seven French lines, and is about eight lines in depth.

In each of these preparations the internal coat has been separated from the subjacent tunics, so as to show that it formed, throughout, the lining of the sacs. In the first and third series of preparations the middle and external coats, still in connection, are also preserved, to show the intimate adhesion which had existed between all the tunics around the necks of the sacs, and the thinness, or entire absence, of the middle coat at their bases. The internal coat is thus seen to have been gradually dilated and protruded through the middle

tunic, so as, in the last series of specimens, to come in contact with the internal coat, leaving the bases of the sacs only protected by the internal and external tunics. These cases, therefore, afforded examples of a kind of aneurisma herniosum, though unlike the cases described under that name by Dubois, Dupuytren, and Liston. The third series of cases afforded a good opportunity of observing the mode in which the small sacs were produced. A very copious deposit of atheromatous material had formed in the layer of fibrous tissue between the internal and middle coats, and this was most extensive in the seats of the small expansions, where, also, it had softened into a diffuent grumous pulp, into which the internal coat, being deprived of its supports, had been gradually protruded, while the fibres of the middle coat were pushed aside or removed by absorption.

DR. WM. M'INTYRE exhibited a specimen of

Extensive Cancer of the Stomach, unattended by Gastric Symptoms.

The diseased stomach was removed from the body of a man, aged 50, who died in a state of extreme emaciation, but under no great suffering.

On opening the abdomen a prominent mass, of an irregular nodulated surface, the size and shape of a small cocoa-nut, and overlapped by the edge of the liver, presented itself in the left hypochondrium. On first view it was taken to be a large protruding pancreas, but proved to be the stomach converted throughout nearly the whole of its extent into a mass of malignant disease—a small portion only of the cul-de-sac, in its cardiac extremity, capable of holding five or six ounces of fluid, being all that remained of a cavity. The back of the stomach adhered to the pancreas. From the inner surface numerous fungoid growths or vegetations were seen to project. They were of various sizes and forms, arising by broad bases, floridly vascular on their apices, and thickly besmeared with a yellow creamy fluid. From the cul-de-sac in the splenic end of the stomach, a narrow irregular track led to the pylorus, which the food must have traversed with difficulty to reach the duodenum, as the channel was much constricted in the middle. The interstices were constricted, but the mesentery, kidneys, and liver, were free from disease. The right lung was partially adherent to the side of the chest, but with this exception the thoracic organs were free from disease.

The morbid degeneration presented a good specimen of cancerous growth of the mixed kind, portions being soft, approaching cephaloma, and overspread with cancer

fluid,—others harder, particularly towards the pylorus, of a more scirrhus character, and exuding from their cut surfaces the true cancer juice. A microscopic examination, made by Dr. Miller, showed the softer portion of the mass to consist of nucleate cells, in which true caudate abounded, fat molecules, and compound granular cells. The harder or scirrhus part exhibited elementary rectilinear fibres, interlacing the one with the other, and numerous nucleate cells in various stages of growth.

The chief interest of the case consists in the absence of vomiting, with the exception of one "bout," five weeks before the patient's death—a fact now too frequently met with to be regarded as singular. In this case food was duly taken almost to the last, and retained without creating any pain, nausea, or other disturbance of the stomach. So little did gastric symptoms present themselves, that the case had, before I saw it, been treated as consumption; and it was the want of chest signs indicative of an amount of pulmonary lesion sufficient to account for the wasting, that led to an exploration of the abdomen, where a distinct tumor, hard and unyielding, was detected a little below the margin of the ribs on the left side, partly in the epigastric and partly in the hypochondriac regions. It was scarcely tender on pressure, and the patient had been unconscious of its presence.

The malignant nature of the growth was at once inferred from the character of the general symptoms, but the precise origin from which it sprang—whether a scirrhus of the stomach or pancreas, or an isolated tumor, was not pronounced with equal confidence.

Dr. BRINTON brought before the Society the results of an operation of M. Claude Bernard, who has discovered that puncturing the medulla oblongata on the middle line of the floor of the fourth ventricle, or between the roots of the vagus nerves, gives rise to the appearance of grape sugar in the urine. During a recent visit to Paris, M. Bernard, with great kindness, repeated this and other important experiments in his presence. The pathological interest of the fact, as well as its extraordinary character, led Dr. Brinton to think that the Society might be interested in having it confirmed in their presence. The steps of the operation were detailed to the Society, and illustrated by the skull of a rabbit. Several specimens of urine from a rabbit thus operated on were exhibited to the Society, and in these it was seen that the copper test, which before the operation afforded no precipitate, gave a very copious one immediately after; and that, after enduring several hours, this saccharine state

of the urine gradually disappeared. A rabbit was also shown which had been operated on about two hours before the meeting, and whose urine exhibited a copious orange precipitate of the suboxide of copper. A satisfactory, but less copious, precipitate was also obtained from a very small quantity of the secretion taken from the animal while before the Society.

Dr. BENOX JONES urged the insufficiency of the copper test. It was evident the operation produced a change in the urine; but he thought the presence of sugar not proved.

Dr. BRINTON disclaimed implicit reliance on any single test. M. Bernard had equally assured himself of the presence of sugar by the incontestable proof of fermentation.

Dr. QUAIN communicated the
Post-mortem Appearances in a Bosjeman Girl, et. 14 years,

with the following particulars of the case, from which the specimens presented to the Society were taken:—This little girl was found, when about seven years old, in Southern Africa, and having been brought to this country, resided here till her death, when she was about fourteen years old. She was intelligent, docile, and had enjoyed good health until about eight months ago, when she was observed to suffer from a severe cough, followed by loss of flesh and strength. The usual symptoms and signs of phthisis were developed, and she died on the 15th instant, having suffered for a few days from what was believed to be an attack of tubercular peritonitis. She had never menstruated. It was stated that she had had a slight spitting of blood two years and a half before her cough attracted notice.

After death.—The little body, which was forty inches in length, was extremely emaciated. The skull (presented to the Society) appeared capacious and well formed. The nasal bones were remarkably flat in their position, and the jaws were prominent. The brain, well formed, weighed thirty-four ounces. The right lung was studded with numerous small tubercular masses, and one or two small cavities (weight, seven ounces). The left lung was almost a mass of tubercular infiltration, which had softened in several parts towards the apex. The bronchial glands, as large as walnuts, were composed of tubercle. Numerous tuberculous masses were found in the subpleural, peritoneal, and pericardiac (parietal) cellular tissue. Tubercles were also found in the spleen (weight, 2½ oz.) and in the liver (weight, 37½ oz.). One of the tubercular masses in the liver, larger than a walnut (presented to the Society),

had softened, and the abscess thus formed having opened into the peritoneum, peritonitis, of which extensive evidences were present, resulted. The uterus and its appendages were remarkably small. The external genital organs were well formed. The kidneys were healthy, the right and left weighing respectively $1\frac{1}{2}$ oz. and $1\frac{1}{2}$ oz. The heart was healthy, and weighed $3\frac{1}{2}$ oz. The weights used are avoirdupois.

Dr. SIMSON exhibited various minutely-injected specimens of

Lung affected with Pleuritis.

In some instances the portions affected with pleuritis exhibited themselves in small red spots, like spots of red ink, scattered over the surface of the pleura, preferring chiefly the base of the lung; in addition to these spots long red lines frequently fringed the margins of the lobes. These red spots and lines consisted of groups of minutely-injected capillaries. These capillaries were numerous divided, tortuous, and irregularly dilated. They were always traceable to one or more irregularly enlarged tortuous capillaries, which were continuous with the healthy small contiguous capillaries. It was manifest that, under the influence of inflammation, the walls of the capillaries had become relaxed, softened, and yielding; and that, under the pressure from behind of the heart's action, the capillaries had become elongated, irregularly dilated, twisted, and looped and distributed in numerously-branched, more minute varicose capillaries. Some of these spots were nearly flat, others were raised and projecting, and others, especially where they were seated at the margins of the interlobular fissures, were drawn out into vascular filaments. These filaments formed vascular bands of connection between the edges of the adjoining lobes. That these vascular pleuritic spots may be formed in a very short period was evidenced in a patient who died twenty-seven hours after being extensively burned: in this case minute violet vascular spots were scattered over the base of the lung.

In some instances, instead of spots, there were vascular prominent patches; and in others, diffused vascularity over an extensive surface.

In those cases of pleuritis where the structure bearing new tortuous capillaries rises above the surface of the pleura, that structure may be torn away in webs from the cellular surface beneath. In doing so the enlarged capillaries, springing from the healthy capillaries, are torn across, and numerous open mouths of vessels are left on the inflamed surface. This exposed denuded surface is not properly the old serous covering of the pleura, but is the

fibrous or aponeurotic structure over which the serous covering was spread.

In emphysema, pneumonia, and phthisis, the serous surface immediately over the diseased portion of lung is very frequently affected with pleuritis. In these instances the character of the vascularity of the inflamed membrane differs from that in ordinary pleuritis. In emphysema the new or developed capillaries are usually small, nearly straight or slightly curved; they do not form elevated groups, but are usually on the same plane with the healthy pleura. In pneumonia there is in some cases a diffused, soft, smooth vascular couch; the new capillaries are tortuous and irregular in size; but they do not form raised groups. In phthisis the character of the pleuritis does not materially differ from that of pneumonia, but sometimes the new capillaries group into a round bulging patch, corresponding with a tubercle underneath.

The degree of softening of the walls of the capillaries appears to regulate the mode of their distribution. The current of the parent capillary appears to give the law to the current of the new capillaries. If the present capillary be straight and small, the new capillaries are straight and small; they ramify at right angles, and the group formed by them is scarcely elevated. If the parent vessel form a curve, the new capillaries form curves also. If the parent vessel be irregularly dilated, first small and then bulging, tortuous, spiral and rising in loops, the new minute capillaries have exactly the same form and direction.

For a further account of this subject, Dr. Sibson referred to his paper on the Situation and Structure of the Internal Organs in Health and Disease, contained in the Provincial Medical and Surgical Transactions for 1844.

Mr. OZSAR HAWKINS exhibited a specimen of

Ulcer of Duodenum after a Burn: fatal in four and a half days by hæmorrhage:

and remarked that the influence of a severe burn upon the mucous surface of the intestines had been well known since Dupuytren first pointed out the existence of great congestion in such cases; in consequence of which observation many cases of ulcers in the duodenum had been since discovered.

Mr. Samuel Cooper had recorded two such cases about twelve years ago. Mr. Long had described some others in a paper on the general effects of burns. Mr. Curling had described six others in the Medico-Chirurgical Transactions, one of which had been observed at St. George's Hospital, and some cases occurring in the same hospital had been published in the

Transactions of this Society, by Mr. Hunt. Of the connexion of such ulcers with burns there could then be no doubt, though why the duodenum was especially selected in preference to the other small intestine, did not appear very plain; still less, why the upper part of the duodenum alone, close to the pylorus, was the part in which they were almost always found.

In some cases there appeared to be no sign of the existence of these ulcers during life, but in many others they proved the immediate cause of death, producing pain in the epigastrium, and vomiting, and terminating fatally, sometimes by ulcerating into the peritoneum, sometimes by hæmorrhage; in which latter case blood may be brought up by vomiting, or passed in the evacuations, or discharged in both ways; and in one case of Mr. Cooper's, blood was found between the stomach and colon, after ulceration had taken place through the peritoneum; the fatal result of these ulcers seemed to take place at very various ages, though generally in young persons, and also at very different periods after the accident. With regard to hæmorrhage, it is singular that while it occurred in six out of ten cases seen or collected by Mr. Curling, the case now before the Society is the first in which Mr. Hawkins had himself known it fatal.

The patient was a little child, six years of age, admitted after a burn of the arm, and upper part of the body and side of the face, and not affecting the duodenum. There was some collapse at first, after which the child seemed to go on pretty well for four days, but just after the expiration of the fourth day it became suddenly faint, and weak, and sinking, and died on the following morning, exactly four days and a half from the burn, having been, as far as was known, in perfect health before that time. There was no vomiting of blood, or discharge by the bowel, so that when Mr. Hawkins found it had died he was at a loss to account for the fatal collapse at this period after the accident. On looking for the existence of an ulcer in the duodenum, as he usually did, he found this part full of blood; and many other parts of the small and great intestines, down to the rectum, contained also some blood.

In the upper and back part of the duodenum, very near the pylorus, may be seen an ulcer, which appears smaller from contraction after its immersion in spirits, but which, when examined, was about an inch and a quarter long, and nearly three-quarters of an inch in breadth. It had exposed the muscular fibres at the lower part, but nearer to the pylorus it may be observed to have gone through this coat towards the pancreas, and crossing it may

be seen an artery or large branch of the pancreatico-duodenalis, close to its origin, which now has a bristle within it, but could be seen by the eye as if half of the vessel had been cut off for half an inch of its course; the vessel having doubtless been the source of the sudden and fatal hæmorrhage.

Mr. Hawkins remarked that he had looked through the dates of the fatal result of these ulcers, and found only one which approached to the rapidity of the present case; it was one of those recorded by Mr. Cooper, in which vomiting of blood had been noticed on the sixth day, and the child died on the seventh day; while in Mr. Hawkins's case the collapse took place just after the completion of the fourth day, and in four days and a half from the occurrence of the accident the child was dead.

Mr. CÆSAR HAWKINS also exhibited a
*Case of Ununited Fracture of the Bones
of the Leg.*

The patient was a girl, ten years of age, who had broken the leg when two years old, so that it had been ununited for eight years; or, possibly from an imperfect account, it might have united the first time, and have broken a second time in the same place two or three years afterwards. The lower part of the limb was quite flexible, and appeared to have scarcely grown at all since the accident, as the limb was in a state of atrophy, being four inches shorter than the sound one from the trochanter downwards, of which three inches were lost in the length of the leg from the knee to the foot: the foot, also, was about an inch and a half shorter than the other, and the circumference of all parts proportionately diminished by the want of growth.

Being perfectly useless, and the condition of the limb after such a length of time affording no possible chance of union, the leg was amputated.

On examination of the preparation, the lower end of the tibia, when about three inches above the ankle, might be seen to project considerably in front of the upper portion, the ends being rounded off: the lower end of the fibula was twisted in front and united to the lower end of the tibia; the two extensor muscles, and the tibialis anticus, lay to the outside of the lower end of the fibula, and the peronei muscles were somewhat twisted in front of the outer malleolus. The substance intervening between the fractured ends of the bones was a tough kind of fibro-cellular substance, without any attempt to form new bone, and without anything like a false joint, the two broken ends being in fact nowhere in contact with each other.

Dr. HARE exhibited a specimen

Of Aneurism of Left Posterior communicating Cerebral Artery, pressing upon and causing complete paralysis of the Motor Oculi of the same side for three weeks before death, which was caused by apoplexy.

A female, aged 18, became an out-patient at University College Hospital, April 18th, 1850, under Dr. Hare. Stature shortish; moderately stout; complexion rather pale. Usually in good health, and had not suffered from illness till the end of June, 1848, when she was attacked with "brain fever," during which she suffered from intense headache, and was so delirious that it was necessary to place her under restraint: several months elapsed before she was able to resume her work. Since this illness her health had not been so good as formerly; a change in her manner had been observed, and she had suffered much from headaches, especially across the forehead: more recently the headaches had become more frequent, and she had occasionally vertigo.

March 29th.—Was at work, and remarked no unusual symptom until evening, when she found that the sight of the left eye became dim, as if there were a mist before it; but there was no double vision, nor has there been any since; at the same time the left upper eyelid became partially closed, and that night or the following morning, entirely so. On Saturday, April 6th, two leeches were applied to the left temple, and the next morning she was able to open the eye partially, but the same evening it closed again entirely, and never opened again to the time when I saw her. On the 19th of April, the following were some of the particulars noted:—Eyebrows equally arched, of equal height; complete ptosis of left upper eyelids; by no effort of the will can she in the least open that eye. No redness of conjunctiva. When the eyelid is raised, the left eye is seen to be everted to the left side (outwards) at an angle of about 60°. Cannot move the left eyeball in the least, either upwards, downwards, or inwards, but quite well outwards: it is therefore only when the *right* eye is moved towards its *inner* angle that the axes of the two eyes are in the same direction. When she is told to look downwards the right eyeball obeys the will, but the axis of the left eye does not in the least alter its direction; the eyeball, however, is *rotated* on its own axis to the amount of one-sixteenth of an inch in such a direction that its outer part becomes more elevated, and its superior part is turned more inwards; the rotation being thus outwards, upwards, and inwards, in consequence of the action of the

superior oblique muscle. No motion, however, in the opposite direction takes place when she attempts to look upwards (owing to paralysis of the inferior oblique), but the left eye remains perfectly motionless while the right one obeys the will. The right iris acts well under stimulus of light, but the left pupil does not act at all either under stimulus of light or consentaneously with any motion of that or the other eyeball; it is much dilated, but unequally so: the iris is considerably narrower at its upper and inner portion than at the rest of its circumference, where its width is uniform, though less than that of right iris. She complains of having considerable pain in left eyelids of an aching character, with sometimes shooting pain in it.

There was, therefore, complete paralysis of all the muscles of left eye supplied by third nerve,—the superior, internal, and inferior recti; the inferior oblique; the iris; and the levator palpebræ: while the external rectus and the superior oblique continued to perform their duties. Four leeches were ordered to be applied to the temples.

After she returned home she appears to have wandered somewhat in her mind, and while the leeches were being applied she was observed to be rather impetuous and irritable: the headache was not relieved by the leeches.

On the Saturday, April 20th, she remained in or on the bed during almost all the morning, and had been speaking to her mother within two or three minutes, when the latter, happening to look towards her, saw her head drop; her face and neck became very red, "just like scarlet fever," and the left eye was observed to be as wide open as the right, and remained so. Mr. Welch, who saw her immediately, confirmed this statement relative to the left eye being then open. This attack, which occurred about 1 p.m., was unaccompanied by any scream or struggling: there was only a slight twisting of the left hand and of the head; the lower limbs were stated not to have moved at all. She died within ten or fifteen minutes of this attack.

Post-mortem examination 75 hours after death.—The rigor mortis continued both in the upper and lower extremities. Neither eye was completely closed; one eyeball not more prominent than the other. The left pupil *very slightly* more dilated than the right one; neither of them more dilated than natural. The viscera generally were very healthy; right side of heart contained dark coagula; vessels of dura mater were large; some dark fluid blood escaped from torn vessels; dura mater itself very opaque, its surface presenting a somewhat opalescent appearance. No opacity of arachnoid

covering superior parts of hemispheres. Both small and large vessels of pia mater congested, as well over anterior as posterior part of hemispheres: the general appearance of brain, owing to the congestion of pia-mater, was, as seen *in situ*, of a pinkish cream colour; but scattered over the surface of the hemispheres, more over the right than left, and more along their borders than elsewhere, were patches of deep red injection of small vessels of pia mater. Over convolutions situated in the longitudinal fissure between hemispheres, these red patches were still more abundant and redder than over superior cranial aspect. At the base of the brain there were patches of redness similar to the above, but much larger, and along the posterior half of each anterior lobe the pia mater was of one uniform deep red.

At the base of brain, under the arachnoid, there was a considerable clot of blood, most abundant from the commissure of the optic nerves backwards over the pons varolii, and on each side of the medulla oblongata; also completely filling up the fourth ventricle, so as to separate the medulla from contact with the cerebellum by a distance of half an inch: the clot in fourth ventricle was of dark purplish black colour, and of consistence of jelly. This clot must have caused considerable pressure on the respiratory tract. In each lateral ventricle there was a small quantity of bloody serum, with a very small quantity of darkish coagulum in one of them: the septum between lateral ventricles was broken down. Substance of brain, especially corpora striata and optic thalami, somewhat softer than natural, but there was no clot in any part of substance of brain itself. Near the anterior extremity of the left communicating artery, a short distance from its junction with the carotid, that vessel (the Post. Com. Art.) presented a sudden ovoid aneurismal dilatation, about $\frac{1}{8}$ th inch in length and $\frac{1}{16}$ th inch in its transverse diameter, its long axis being in the direction of the vessel; it was partially filled with dark-coloured softish coagula; air could be readily blown into it both from the basilar artery and from the left carotid; at its cerebral aspect there was a small fissure from which the blood probably escaped.

The right third nerve was perfectly healthy, but the left one, where it crossed under the posterior communicating artery just at the point of the aneurismal dilatation, had been so pressed upon by the aneurism, as to have become almost completely atrophied, the few remaining fibres of it being seen spread out upon, and in a manner incorporated with, the walls of the aneurism. Beyond this part the nerve reassumed its natural appearance. The

aneurism likewise pressed by its right border and superior surface upon the left optic nerve a little posterior to the commissure.

Portions of the basilar and internal carotid arteries were examined under the microscope, but no fatty degeneration of them was detected, nor was there any atheromatous deposit in them; but the arachnoid covering them was considerably thickened.

Dr. SIEVEKING brought before the Society a case of

Fissure of the Sternum.

Eugène Groux, a native of Hamburg, aged 17, a corrector of the press, was brought by Dr. Swaine, physician to the German Hospital, where the boy had been under treatment for a severe attack of diarrhoea. He presented a very remarkable anomaly, in the shape of a deep fissure of the sternum, of sufficient width to resemble an entire deficiency of that bone. In width about two and a half inches, it was capable of admitting several fingers; and only at the lower part, corresponding to the xiphoid cartilage, on deep pressure, a bridge of bone uniting the lateral portions could be discovered. The ribs at both sides of the fissure were united vertically by bone, so as to represent the lateral halves of the sternum. The viscera under the fissure were covered by the soft tissues only, and the base of the heart could be felt to pulsate, and seen distinctly at the upper portion. No abnormal sounds could be detected to prove any anomaly in the position of the viscera. There was no other deficiency in the mesial line of the body, and the boy had never suffered from any peculiar inconvenience connected with the malformation. The only complaints he is liable to are occasional attacks of diarrhoea. There is no evidence of hereditary transmission, nor is there any similar affection in his own family.

Also a case of

Atheromatous Deposit in the Aortic and Mitral Valves, with Hypertrophy of the Left Ventricle.

A blacksmith, *et.* 42, was taken seriously ill on Nov. 5th, 1849, from which time till his death he was confined to bed. He had felt very languid, and had been subject to profuse sweating, for five months previously, but was able to continue his work without suffering from palpitation or any other illness. He was notoriously a strong, powerful man, and had in earlier days been in the habit of rowing. When seen by Dr. Sieveking, on the 20th November, he was found to be labouring under severe bronchitis, and valvular disease of the heart. Shortly after severe hæmoptysis

supervened. The murmurs were both systolic and diastolic, and there was very considerable pulsation perceptible at the epigastrium, immediately under the xiphoid cartilage, but without any murmur. The disease was considered mainly to affect the mitral valve, and the nature of the abdominal pulsation was doubtful, although Dr. Parkes, with whom Dr. Sieveking coincided, was of opinion that it was not attributable to aneurism.

January 1st.—Vomiting occurred. In the middle of the same month the patient complained of intense pain in the stomach, which was relieved by pressure. The expectoration of blood continued, and the pulse in the abdomen became intermittent. On the 18th January he presented œdema, nausea, and hiccup, the hæmorrhage ceased, and, on the 22d January, hiccup had entirely ceased; the sputa was bronchitic, perfectly clear; there was no pain; pulse regular; the pulse in the abdomen no longer perceptible either to the touch or to the stethoscope. Throughout, the diastolic murmur predominated, and was heard over almost the entire thorax. Towards his end the sounds became more muffled, accompanied by extensive dulness at the lower part of both sides of the thorax. The systolic murmur was heard in the carotids, and the pulsation distinctly visible in them and in the femoral and radial arteries. On the 2d April he had been worse for several days; cough more troublesome, and sputa slightly tinged with blood; nights restless; the œdema and ascites increasing; tongue clean; pulse full, 100; bowels open; sounds more muffled, the second almost inaudible, the first audible over the entire thorax, but most distinctly to the right of the left nipple. A fortnight after he was moved to another residence, gradually grew weaker, and died on the 26th April.

Post-mortem, 23 hours after death.—Considerable rigor. Thorax: both cavities of the pleura filled with as much amber-coloured serum as they could contain, both lungs being forced up to a level with the 3d and 4th intercostal space; the right lung adherent at the apex, and anteriorly down to the 3d rib, but easily detached; the lobes firmly united by old effusions of lymph; the apex crepitant, and containing mucus, but no trace of tubercle; at the base hepatization, but no suppuration or abscess. The left lung presented adhesions inferiorly and posteriorly near the base, which were firm and old; it was also firmly adherent to the pericardium; the apex crepitant, and much mucus issuing on incision; no tubercular deposit; the base of this lung hepatised, and more gorged with blood than the base of the right lung; the

pericardium very much distended by serum; its apex adherent to the costal pleura. The heart heavier and larger than normal, owing to thickening of the left ventricle, the walls of which measured 7-8ths of an inch in diameter; a large white fibrinous coagulum occupied its cavity, another coagulum having been previously removed from the aorta: the aortic valves entirely insufficient, scarcely offering the slightest impediment to the passage of a stream of water poured into them. A large atheromatous growth extended from within outwards into the aortic orifice, the free end of which had evidently been torn from its connection with the nearest flap of the mitral valve, where a remnant of the same deposit was seen corresponding exactly to the free end of the excrescence, of sufficient size to bind two folds of the aortic semilunar to one of the mitral valves; the result being to maintain partially and permanently distended the folds affected. A small warty excrescence was observed on the centre of the third aortic flap, and a similar but larger deposit was seen on the auricular side of the mitral valve towards the septum. The whole of the affected part of the mitral valve was thickened and opaque, the opposite side of the valve being perfectly healthy. The disease appeared to have originated in the aortic valves, and extended from thence to the mitral. Beyond a fibrinous coagulum, nothing abnormal was noted on the right side of the heart. The foramen ovale was largely patulous, so as to permit the passage of the tip of the little finger. Abdomen: beyond a very considerable accumulation of amber-coloured serum, to the amount of about fifteen pints, in the cavity of the peritoneum, congestion of the kidneys, pallor of the liver, no morbid appearances were observed.

Mr. AVERY exhibited a

Tumor of the Parotid Gland.

Edward Tidmarsh, æt. 37, admitted into the Charing Cross Hospital 22d April, 1850. Five months before, he noticed a small swelling, the size of a pea, not moveable, just in the situation of the parotid. He was not aware of having received a blow or suffered any violence at the part. A firm elastic swelling, the size of a small walnut, could be felt in the situation of the parotid, partly in relief, and partly sinking deeply between the root of the zygoma, the mastoid process, and the ramus of the lower jaw. The integuments were free in front of it, as well as the *mentus externus*, against which it was strongly pressed. Firmly grasped between the fingers, it was found slightly moveable; but it was quite impossible to define the depth to which it

extended. Three months after he had observed the swelling he began to lose the power of shutting the eye on that side, and gradually the whole of the muscles supplied by the seventh nerve were paralysed. The tumor had increased gradually and without pain till within two months, when he suffered a good deal of pain at the temple. His health has been always good. He is a strong, powerful man, and continued his occupation as a blacksmith up to the time of his admission. The operation for the removal of the tumor was performed on the 10th of May, 1850; and after dissecting away, from the front of the tumor, some very firm fascia and condensed tissue, which pressed the tumor very strongly inwards, the latter was without much difficulty turned out of its bed, which was either in or on the parotid gland. None of the natural structure of the gland was recognised either before or under the tumor. After the operation the patient could nearly close his eye, and had some power over the angle of the mouth. No bad symptoms followed the operation. On the tenth day the wound had nearly closed; on the eleventh, he left the hospital. The tumor was about the size of a small walnut, slightly lobulated externally, and covered by a thin membrane of condensed cellular tissue. A section of it presented a greyish yellow homogeneous appearance, slightly transparent, not fibrous in its texture, not difficult to break up with the scalpel, and yielding by scraping an abundance of a cream-like fluid. The aspect of the section was like what is seen in a lymphatic gland in the neighbourhood of a malignant tumor. The cream-like fluid exhibited plenty of what are described as cancer cells. The tumor was examined by Mr. John Birkett, who also considered there were all the elements of cancer contained in it. Professor Fergusson said he had removed more than one of the same kind from the parotid, and considered them malignant.

Mr. HAYNES WALTON exhibited a specimen of

A Carious Head of a Femur,

that had been removed by Mr. French, of Great Marlborough Street. E. M'Donough, *et. 11*, was admitted into the St. James's Infirmary in November 1844, with incipient hip-joint disease. She recovered sufficiently to be able to walk, and left the Infirmary. In 1849 she was re-admitted because of the return of the disease. Abscesses soon followed, and then the usual symptoms of hectic and emaciation: she was also occasionally troubled with diarrhoea. On Thursday last, with the assistance of Mr. Fergusson and Mr. Walton, Mr.

French made an exploring incision over the situation of the joint, to ascertain the condition of the head of the femur, and, if possible, that of the acetabulum; having previously decided that if the head of the bone were much diseased, and especially if it were dislocated, and the bones of the pelvis did not appear to be implicated, to remove the head of the femur; for it was evident that, unless some speedy relief was afforded to the patient, from the profuse discharge of matter through the many sinusses that existed, her dissolution was near at hand. The head of the bone was dislocated, and lay in the cavity of an abscess. Strictly speaking, there was no head to the bone, for it had disappeared, with the greater part of the neck also. Therefore, that which was removed was the remains of the neck, with the trochanters, and a part of the shaft. The acetabulum was perfectly healthy, but contracted.

Mr. Walton exhibited a similar portion of bone, from a young patient, also under Mr. French, whose case was similar to that just mentioned, and in whom the same operation was performed. She recovered perfectly. Want of time prevented Mr. Walton from making observations on these cases.

Mr. COULSON exhibited

A Fibro-cystic Tumor,

which he removed from the thigh of a woman between 40 and 50 years of age. It was very large, and situated just above the inner side of the knee-joint, resting on the vastus internus, and bounded externally by the rectus, and internally by the inner hamstrings, which it overlapped. There was one large cyst, containing a dark-coloured fluid, and lined with a fibrinous substance, which could be easily detached; and at the base there was a solid substance, which did not appear to be a growth from the internal surface of the cyst, but to have been developed in the substance of the parietes of the cyst, and therefore of secondary formation; the tumor existing originally on a simple serous cyst. It was of a non-malignant character, consisting chiefly of fibro-cellular tissue. The skin over the cyst was very thin, and covered with numerous large veins. The cyst was seated external to the fascia, unconnected with the knee-joint, and easily removed.

Dr. OGIER WARD exhibited a

Case of Perforating Ulcer of the Stomach.

C. C., *et. 16*, servant, chlorotic, had never menstruated, but enjoyed pretty good health, except that she suffered from pain in the stomach, and rejection of the food soon after eating, was seized suddenly with extreme pain in the abdomen, attended

with vomiting, which carried her off in twenty hours. During her illness she lay constantly on her left side, with her knees drawn up.

Section, 21 hours p. m.—Lungs healthy, but adhering to the pleura by old adhesions, mingled on the left side with patches of recently effused transparent lymph, more or less tinged with blood. The pleura beneath was covered with bright red spots, and numerous fine lines passed from them into the lymph. There was also some serum, mixed with flakes of lymph, in the pericardium, but it presented no other mark of inflammation. About two and a half inches from the cardiac orifice, and in front of the stomach, was a square ulcer, with thick, rounded, abrupt edges, passing through the mucous and muscular coats, and opening by a smaller orifice into the cavity of the peritoneum, which was inflamed, and coated with opaque lymph throughout the whole of the left side of the abdomen, but not on the right. The mucous membrane was healthy, firm, and rather thickened near the ulcer, but over the rest of the stomach it was highly mammillated. About two inches from the ulcer, along the smaller curvature, the stomach was punctured, as though by the contraction of the cicatrix of a former ulcer. The uterus and its appendages were undeveloped.

Also

A Case of Ulceration and Perforation of the Oesophagus, with enlargement of its calibre.

A boy, *æt.* 16, died rather suddenly of meningitis of the base of the brain, extending down the theca vertebralis. He had enjoyed good health till two months before his death, when he struck himself against a post, and since then he had been subject to sick headache. He was ill a week with pain in the chest and head immediately after the accident, and afterwards for about a month he complained of pain in the chest, and difficulty of swallowing the first few mouthfuls at his meals, which, he said, seemed to stick in his throat; but this complaint ceased before his last illness.

Section 90 hours p.m.—Abdominal organs healthy; lungs healthy, but adherent by firm bands of lymph to the pleura, particularly on the right side in front. Besides the lesions within the cranium, the oesophagus was dilated, and deprived of its epithelium opposite the bifurcation of the bronchi, where there was a longitudinal ulcer one and a half inches in length through the mucous membrane, with two small orifices at its centre communicating with each other, and by a canal three and a quarter inches long with an enlarged bron-

chial gland filling up the interval between the bronchii. This gland was in a partial state of suppuration, but no pus flowed along the canal on pressure.

This was the last meeting of the Society for the season.

SURGICAL SOCIETY OF PARIS.

May 20, 1850.

PRESIDENT, M. DEGUIN, *père*.

Excision of the Elbow-joint.

M. CHASSAIGNAC detailed the operation to which he had had recourse for the removal of a white swelling in a man forty years of age. One incision only was made, on the outer side of the joint: the end of the radius was first removed, then that of the ulna, and lastly that of the humerus. These parts were detached by means of the chain saw, and removed by the elevator. The ulnar nerve was protected. The operation was laborious, but the results have been most favourable. There was only slight hæmorrhage, and no vessel required the ligature. The wound was fast healing. The portions of bone removed were carious, becoming stalactitic, and the cartilages were almost entirely destroyed.

M. DEMARQUAY objected to this operation, that it is almost impossible to avoid injuring the ulnar nerve.

Fistulous Disease of the Superior Maxilla opening through the Cheek.

M. CHASSAIGNAC presented a patient in whom, after the extraction of a tooth, an abscess had formed which had opened through the cheek, establishing, for eighteen months, a fistulous orifice. M. Chassaingnac, in this case, had recourse to the following proceeding:—he had divided the cheek from the maxillary bone, with the *tenotome*, as far as the fistulous orifice. Then, having passed a wire through the aperture in the cheek, he attached to its internal extremity a piece of *charpie*, with which he brought together the lips of the opening, thus obliterating the perforation. The result was a complete cure.

MM. HUGUIER, MAISONNEUVE, LARREY, MOREL, and DEMARQUAY, stated that they had succeeded in the same manner in similar cases with that related by M. Chassaingnac.

MM. DEBOUT and GUERSANT thought that the simple removal of the source of the abscess was a more effectual treatment.

New Method of Treating Abscesses.

M. CHASSAIGNAC observed that the walls

of an abscess after it has been emptied may be regarded as the surfaces of a recent wound, and that they are susceptible of union by the first intention. It is, of course, essential to this union that there shall be no persistent source of suppuration, such as caries or other disease of bone; that the limits of the abscess shall be fixed, and its walls free from attachments to adjacent parts, which may prevent the complete approximation of its surfaces; and lastly, that no foreign body shall be present in the cavity.

M. Chassaignac's treatment consists in making a very small opening, evacuating the pus entirely, and washing out its cavity with injections, until they return without any trace of pus. Compression is afterwards employed. For a few days plastic lymph exudes, at first limpid, afterwards sanguinolent, then even puriform. The cure is represented as being certain and speedy, being obtained sometimes in twenty-four hours, in other cases in three or four days.

M. VIDAL stated that M. Chassaignac's proposal contained nothing new but the placing in immediate contact the walls of the abscess.

The discussion on this subject was adjourned.

ACADEMY OF SCIENCES, PARIS.

May 27, 1850.

PRESIDENT, M. DUFRÉY.

Alleged Poisoning as an Effect of Handling Metallic Zinc.

MM. LANDOUZY and MAUMENI transmitted several observations of the poisonous effects of zinc on the workmen employed at Rheims, in twisting the galvanized iron wire, which is used for fastening down the corks of bottles of champagne. Iron wire only was formerly employed. At the beginning of the present year zinc electroplated on iron wire was introduced, since which time the workmen have suffered various ill effects, such as inflammation of the mouth and fauces, inflammation of the tonsils, ulceration of the gums, salivation, colic, diarrhoea, &c. It has been observed that these consequences followed on the use of those wires which, having been carelessly and imperfectly galvanized, were more or less coated with oxide or carbonate of zinc, the powder of which becoming detached was diffused through the air which was respired by the workmen.

The phenomena observed presented a close analogy with those of the minor de-

grees of lead or mercurial poisoning; and if its influence be prolonged, there is every reason to believe that the results would be equally serious. The authors considered that the affections thus produced, should obtain a nosological position as "zinc poisoning."

Hospital and Infirmary Reports.

FELLOWS' PRIZE REPORTS

OF

CASES OCCURRING IN UNIVERSITY
COLLEGE HOSPITAL,

SUMMER SESSION 1845.

By C. H. F. ROUTH, M.D. Lond.

[Continued from p. 1000.]

REMARKS.—The chief interest of this case is to be found in the relation between the state and quantity of this patient's urine, and the syphilitic symptoms, especially the scaly cutaneous eruption.

Diagnosis was necessarily here very easy. It was evident this patient was labouring under secondary syphilis.

I. 1. From the previous history. Two primary syphilitic affections, followed one month after by the occurrence of bubo; in a twelvemonth by a scaly cutaneous eruption. In the present attack, the affection of the shin bones had come on gradually. 2. The pain being of a stinging, burning character, worse at night, relieved during the day. The only two affections with which this swelling over the tibiae could be compared were ordinary periostitis and erythema nodosum: but it could not be the former; periostitis usually comes on suddenly, with marked symptoms of fever. Nor is the pain particularly aggravated at night. Nor could it be erythema nodosum: in this disease the swelling is more limited in extent; moreover, the inflammation is confined to the skin and cellular tissue, not the bone, and the skin is generally red, not perfectly pale and natural over the inflamed bone, as it was in this case.

II. Much of the eruption on the back of the neck was evidently acne: the oily and greasy look of the eruption; the inflammation of the surrounding skin; the hard indurated feel of the same; the visible dilated and obstructed duct at the apices of several of these, and the purulent pultaceous secretion,—are all symptoms peculiar to this affection.

III. There was a squamous eruption

over the arms and legs, consisting of small, rather elevated, macule upon the surface, upon which small silvery scales could be observed, the macule being of a coppery colour. These were symptoms directly pertaining to a syphilitic eruption.

IV. There appeared to be some enlargement of the heart. The amount of dulness on percussion was rather more extended than it should have been; the apex beating behind the sixth rib. Enlargement of the heart from hypertrophy usually takes place downwards. The impulse was, however, but little increased. The cardiac complication was, therefore, chiefly dilatation. The right ventricle was enlarged, as evinced by the epigastric pulsation.

V. There was probably incipient phthisis at the apex of right lung. The right side superiorly was duller than left, and this was most marked on and above the clavicle. There was, moreover, some moderately-fine crepitation heard both at the end of inspiration and the beginning of expiration. Could this be due to pneumonia? There was no dyspnoea, expectoration, pain, or fever, usually observed in pneumonia. Moreover, in this latter disease the fine crepitation is generally limited to the end of inspiration, *not the beginning* of expiration, nor did it exactly resemble that of pneumonia, being too dry in character. But crepitation may, and often does, occur in connection with *early* phthisis, as has been shown by Fournet. Taking this fact in connection with the scrofulous temperament of the patient, the nature of his occupation, his liability to coughs, and the loss of flesh which he had noticed about his body, it appeared most probable to attribute this consolidation to a trifling amount of tubercular deposit in the apex of the right lung.

VI. and lastly. The liver might be congested. It was certainly much enlarged on his admission.

CAUSES. Predisposing.—1st. The nature of his occupation. Frequently much exhausted by hard work, and then exposed to remain in a cold mill, with his feet frequently wet, without being able to change.

2d. The employment of mercury may be looked upon as a predisposing cause to the occurrence of nodes. When first questioned as to whether he had been salivated or not, he answered in the affirmative, but subsequently he qualified his statement by adding it was so long back he was not sure. But even if the employment of the drug in this patient was not carried to salivation, there seems to be little doubt but that it was administered.

Mr. Samuel Cooper states, that in secondary syphilis true nodes are rarely seen

unless the patient has taken mercury. Dr. Hennen had only seen two cases where they were present, and mercury had not been taken. According to Dr. Graves, even apart from any syphilitic, rheumatic, or scrofulous taint, periostitis is most commonly caused by the secondary effects of mercury.

3d. Defective action of the kidneys. On his admission, and this at a time when he was living freely, and taking meat three times a day, and for three or four days following, his urine was less in quantity than normal and, excepting on one solitary occasion, the 17th, it gradually increased till, at his departure, it was nearly double what it is normally. Moreover, throughout the case a manifest improvement occurred synchronously with the increased quantity of urine. The urine was alkaline on the 9th, and on this and the following day there was an excess of carbonates in the urine. The production of these is stated by Dr. G. Bird to be due to the decomposition of urea.

In relation to the sudden diminution of the urine on the 17th, it is interesting to note that it occurred synchronously with the application of the blister. Blisters we know are often apt to produce not only strangury, but actual nephritis.

Large organic globules were found on two occasions with linings of the tubes; and on two occasions, also, a trace of albumen was detected. The high specific gravity of the urine, however, was opposed to the belief that Bright's disease existed.

Cystic oxide was seen twice, as also oxalate of lime and uric acid crystals, on the day of his departure the peculiar four-sided tapering bodies before noticed in the case of Hicks. These, however, in no way directly point out disease of the kidney.

Upon the whole, the condition of the urine might be said to be healthy, only the quantity passed in the twenty-four hours defective; and the diuretic effect of the Iodide of Potassium, as the cure progressed, is an interesting feature in the case, as pointing out the pathology of eruptive diseases in general, and the *modus medendi* of medicines in their cure.

It follows from the above remarks, that this defective action of the kidneys, by allowing excrementitious matter to remain in the blood, acted as a predisposing cause to the local lesions, eruption and nodes, perhaps also to the acne.

4th. The presence of syphilitic poison still in the blood. The syphilitic inflammations all depend upon a peculiar morbid principle circulating through the blood, which, like urea, lithic and lactic acids, &c., may give rise, by their irritating quality, to inflammation in different parts of the body. The inoculation of the virus gives

rise to the disease: the symmetrical arrangement of the local lesions produced favour this supposition; idiosyncrasy, diathesis, or accidental causes, sometimes modifying this result.

Ricord is of opinion that if the cancer be destroyed the first, second, third, fourth, or even fifth day, there will be no constitutional secondary affection. After this period, if the cancer persist, secondary symptoms will almost invariably occur, and the employment of mercury, though it may delay, will not prevent their occurrence. The present case is a good illustration of this doctrine. It appears that having twice suffered from cancer the cure was never effected within the week. The first appearance of secondary symptoms occurred within the twelvemonth. This is the usual rule, but does not appear at the time to have been perfectly cured. The poison thus lurked in the system. The nodes did not make their appearance till about three years, or two years and three-quarters, after the primary symptoms. This, however, is the common case, even with ordinary periostitis swelling and inflammation of the bone produced as a secondary effect of mercury. In the course of one, two, three, five, or even a greater number of years, exposure to cold, a blow, or apparent trivial cause, will give rise to periostitis in some patients. Indeed, in one case attended by Dr. Graves the affection was observed nine years after salivation. The same remarks generally apply to syphilitic nodes.

5th. This patient was of a scrofulous diathesis. This is an affection which predisposes greatly to the occurrence of periostitic inflammation.

Exciting causes.—That of the eruption was evidently the primary affection. That of the nodes appears to have been exposure to cold during the month of February: the highest degree of temperature not having amounted during this month to 47° F., frequently as low as 27°, and on one occasion to 4°.

Treatment.—The eruption in this patient was but trifling. What chiefly tormented him was the nodes. The most different opinions have been expressed in regard to the treatment of this affection. Hunter recommended the use of mercurials. Thomas states the affection is incurable without mercury. Sir A. Cooper recommended blue pill and opium generally, with hot fomentations locally. Mr. S. Cooper recommended the Tinct. of Iodine and Iodide of Potassium, and mercurial ointment locally, with mercury or Iodide of Potassium generally; and where the constitution has been broken down by mercury, bark, sulphate of quinine, sarsaparilla, &c.

Dr. Graves recommends Iodide of Po-

tassium, gradually increasing the dose in some cases to 3ss. three times a day. Ricord recommends mercury as the best specific to get the poison out of the system. In most provincial hospitals blisters are applied locally, with mercury generally. Mr. Carmichael, Dr. Fricks, Oppenheim, Rose, and most army surgeons, state mercury is not only not required, but often proves injurious. Most of the eminent London surgeons recommend mercury. In the midst of so many conflicting opinions it would be difficult to decide which is the best.

This patient was treated with Iodide of Potassium, chiefly for three reasons. He was of a scrofulous diathesis. He probably had incipient tubercle in one lung: in such cases mercury is contraindicated. 3d. His urinary secretion was scarcely active enough, and we know that copious diuresis is frequently the best means of ridding the system or blood of any poisonous substance. Now Iodide of Potassium is a most powerful diuretic: moreover, it is the best remedy for scrofula.

To allow him to sleep, and thus recover his tone and strength, he was ordered to take half a grain of morphia every night, a moderate diet being allowed him; his bowels at the same time being properly regulated by occasional aperients. The effect of this treatment was most marked. The lulling of the pain appeared to be chiefly, however, attributable to the morphia. On the 10th, the remedy was inadvertently omitted, and the pain returned: still it was less severe than formerly. A blister was applied later in the treatment of the case over each shin, and this was followed by a diminution of the size of the node, and almost entire disappearance of the pain. The Iodide was gradually increased, and synchronously the quantity of urine passed in the twenty-four hours was greatly increased. He left the hospital on the 24th, greatly relieved, the eruption having entirely disappeared, and the nodes being no longer painful.

Unfortunately, however, he lived freely on leaving it, and was not so well on the 29th, when he returned, so that he could not be said to be cured.

Prognosis.—The probabilities are, that the habits and occupation of the patient are such, that the disease will, sooner or later, return, yet, excepting for these, there is every reason to believe that had he persisted in the use of the remedies, that a perfect cure had been accomplished.

Correspondence.

CONVENTION OF POOR-LAW MEDICAL OFFICERS.

SIR,—With the desire to bring more prominently before the public the present faulty system of poor-law medical relief, the committee of poor-law medical officers have inserted an advertisement on the subject in the daily and weekly journals. As a matter of intelligence for the profession, it would be interesting and even useful to the movement the committee are engaged in, if you would bring the same before the notice of your readers.

[Copy of Advertisement.]

THE POOR-LAW BOARD.

The Sick Poor, their Medical Attendants, and the Rate-payers.

In England and Wales, a staff comprising more than 8,000 professional gentlemen, acting under the Poor-law Board, administer relief during penury, disease, and suffering, to nearly 3,000,000 of human beings.

The demands made upon the time, skill, and health of these medical officers, who are often called, single-handed, to succour nature under the most appalling calamities to which humanity is subject, are urgent, frequent, perilous.

This class of gentlemen are nominally requisited from a fund annually raised for the poor, amounting to nearly eight millions sterling. Called into active service by the humanity and wisdom of the nation, they have been considered as paid by £197,958, averaging per case, as shown by above 800 promiscuous returns, in country districts 2s. 7d., and 1s. 6½d. for metropolitan districts, being less than half the cost of drugs alone in hospitals. One half of this amount is paid by the parishes, the other out of the consolidated fund.

Impelled by a sense of renewed and continued oppression and misrule, injurious to themselves and also to the sick poor, and to the rate-payers, the poor-law medical officers have often laboured for the reform of the vicious system.

Convinced of the existence of these evils opposed to justice, humanity, and science, Lord Ashley (aided by the indefatigable exertions of Mr. Guthrie, then president of the College of Surgeons) obtained a parliamentary inquiry through a select committee in 1844. Strong and conclusive as was the evidence then obtained, little if any amelioration ensued; no enactment passed the legislature to correct the abuses thus made manifest. Multiplied aggressions and miseries, needlessly incurred through false

economy, found another organ by which to give utterance to their complaints in the convention which was established in October, 1847, over the first annual meeting of which Lord Ashley presided.

Petitions to Parliament from various classes of society have been numerous and frequent. Deputations have waited on the Home Secretary of State, and again and again on the Poor-law Board. These deputations have been received with official politeness, and with assurances of sympathy and promises of consideration.

More recently, orders have emanated from the Poor-law Board urging curtailment of expenditure, sanctioning deviations from their consolidated order, and suggesting a further reduction of salaries to medical officers, even bringing them down in one metropolitan union to about 8d. per case. Such appreciation of the services of professional men, who are expected to be gentlemen of education, ill becomes a Board, one of whose secretaries, Lord Ebrington, receives a salary of £1,500 per annum, for doing that which occupies but a moderate portion of his time, reserved from parliamentary and other duties.

The Poor-law Union surgeons make this appeal to the public, and to the press more especially, satisfied that such a system cannot long be maintained when fully brought under public notice and exposed to general condemnation.

By order of the Committee,

THOMAS HODGKIN, M.D.,
Chairman.

CHAS. F. J. LORD,
Honorary Secretary.

4, Hanover Square, May 14, 1850.

The Committee have addressed a short special note to each member of Parliament, with a copy of the above. It is, however, to be feared, that amid the press of their other official duties, the cause may fail to obtain the adequate attention of members, and consequently lose their efficient aid, unless they can be moved individually through the influence of personal friends. The committee of course cannot do this, but our highly respected chairman, Dr. Hodgkin, has very judiciously suggested that as every member of Parliament, or some branch of his family or connections, must be professionally attended by, and more or less familiar with, some medical man, it is evident that our brethren throughout the country might exert an influence sufficient to effect an amelioration in the present system of Poor-law medical relief.

Hoping to produce this co-operation among our own body, to bring exertions to a focus, to illustrate that "Unity is

strength," I beg the favour of your publishing this letter embodying a copy of the address recently given as an "advertisement" to the public.—I have the honour to be, sir,

Your most obedient servant,
CHARLES F. J. LOEB,
Honorary Secretary.
4, Hanover Square, June 7, 1850.

Medical Intelligence.

THE YELLOW FEVER AT RIO JANEIRO.

THE latest accounts from Rio Janeiro confirm the statements concerning the terrible ravages of the yellow fever in that city. Vessels had arrived at Rio, direct from Europe, with cases of fever on board that had broken out at sea, showing that the epidemic was not confined to the shores and harbours of South America. The average number of deaths was about 250 a day. The epidemic had spread to all the neighbouring towns on the shores of the harbour, and even to the town of Petropolis, 40 miles from Rio, and between 2,000 and 3,000 feet above the level of the sea. The steamer *Cormorant*, which sailed from Rio on the 24th, arrived at Montevideo on the 30th, having lost seven men shortly after leaving that port, one other having since died in the harbour of Montevideo. Fourteen other cases appeared on board the *Cormorant*, amongst these the commander; the majority were doing well — three only being considered dangerous.

THE CASE OF DR. J. W. WEBSTER, OF BOSTON.

WE are credibly informed that Dr. Webster, of Boston, U.S., whose conviction on a most atrocious charge of murder we had lately occasion to record, has had the execution of his sentence respite for a year. It is supposed that ultimately his life will be spared, and the sentence commuted to perpetual imprisonment.

THE HOSPITAL FOR CONSUMPTION AT BROMPTON.

THE eighth anniversary festival of this excellent institution was held on Wednesday evening last, and was presided over by Lord Feversham. From the report which was read by the secretary, it appeared that during the past year 360 in-patients have been received within the walls of the hospital, being an increase of 78 over the number admitted in the preceding year. Of this number 217 were relieved and discharged more or less benefited, 62 died, and there were 81 still remaining in the house when the report was drawn up. Since the

opening of the new building, in 1846, 1,036 in-patients had been admitted, of whom 760 were relieved and discharged, and 196 died. The number of out-patients treated during the past year has been 3,176, being an increase of 371 over the number treated in the previous year. The report points out that many of these patients continue under treatment for months, and that during the year the number of prescriptions to out-patients alone has amounted to 26,956. When to these facts, illustrative of the good which the charity has effected, it is added that no less than 141 patients are now waiting their turn for admission, and that during the year the number so situated has averaged 47 males and 62 females, some idea may be formed of the hospital's claims upon public benevolence, and of the excellence of the cause in favour of which the chairman of the evening had to make an appeal to the company. Lord Feversham was not unsuccessful in his advocacy, for during the proceedings the secretary announced several long lists of subscriptions, amounting altogether to the sum of £1,500.

MEDICAL REFORM.—THE NATIONAL INSTITUTE AND THE BALLOTING PAPERS OF THE "LANCET."

To the General Practitioners in Medicine, Surgery, and Midwifery of England and Wales.

THE attention of the Council of the National Institute of Medicine, Surgery, and Midwifery has been directed to the balloting papers issued in the *Lancet* of the 8th inst., for the purpose of canvassing the profession on the following questions; viz. :—

"Whether the Charter of the Royal College of Surgeons of England should be so amended as to admit practitioners in medicine, surgery, and midwifery to seats in the Council of that College, on the principle of representation?" or,

"Whether the practitioners in medicine, surgery, and midwifery should be incorporated in an independent College, on the principle of representation?"—

And accompanied by an earnest request from the editor for the return of the balloting papers on or before Saturday next, the 15th inst.

Under these circumstances, the Council of the National Institute point out, with as little delay as possible, the utter impossibility of arriving at any just conclusion upon so narrow and circumscribed a basis as the one submitted for the consideration of the profession in the balloting papers alluded to.

The Council of the National Institute have invariably asserted that the medical reform question involves far higher considerations than the mere question whether it is expedient that fellows of the College of Surgeons in general practice should or should not be eligible to be elected on the Council of the College. They maintain that the future education of the surgeon, in general practice, should be made complete in medicine and midwifery, as well as in surgery; and so long as the two latter branches of professional education are unprovided for in the College examinations, and it is pertinaciously maintained as a *special* College, so long will the Council of the National Institute consider it their duty, on public grounds, to advocate the necessity of establishing, with as little delay as possible, a new institution, comprising within itself the entire range of medical and surgical science. Furthermore, the Council of the National Institute have invariably declared their readiness to forego the claim for a separate institution, provided the government would undertake to effect this alteration in the constitution of the College of Surgeons. The experience, however, of the Council of the National Institute, from all that has transpired on the subject of medical reform, more than ever convinces them that the attainment of this object is impracticable,—from the fact that both the Right Hon. Sir James Graham, and also Her Majesty's present government, have repeatedly expressed their unwillingness to effect any alteration in the constitution of the College of Surgeons, except in accordance with the wishes of the Council: that a large number of the members practising, throughout the country, medicine, surgery, and midwifery conjointly, are not members of the Royal College of Surgeons of England, whilst a very large number have no other qualification, and are consequently practising in medical cases illegally. In order to get rid of all distinctions amongst medical men engaged in general practice, and to secure for them as high a standard of education as they can fairly attain, the Council affirm that it is impossible to overcome the difficulties in the way of settling satisfactorily the medical reform question, other than by the incorporation of all qualified persons, by royal charter, in one college.

In order that the deliberate opinions of the profession generally may be fairly ascertained, and from a conviction that it is utterly impossible that any medical bill can be framed so as to become a law during the present session of parliament, the Council of the National Institute respectfully, yet earnestly, suggest the propriety of the general practitioners withholding, for the

present, any expression of opinion upon the very limited question submitted for their consideration in the balloting paper published in the *Lancet* of the 8th of June instant. And with a sincere desire of accomplishing that general accordance so essentially necessary, as implied in the remarks of the Secretary of State, the Council of the National Institute will endeavour, with as little delay as possible, and by every means in their power, to ascertain the real wishes and opinions of the general practitioners on the points at issue, and on the main principles of medical reform; and they invite the co-operation of other Associations, who are also equally interested in the settlement of this vexatious question.

By order of the Council,

GEORGE ROSS, Secretary.

The National Institute of Medicine,
Surgery, and Midwifery,
4, Hanover Square, June 4th.

NAVAL ASSISTANT-SURGEONS.

PETITIONS, praying that better accommodation may be provided for the assistant-surgeons of the Royal navy, were presented to the House of Lords on Friday last, by the Duke of RICHMOND, from the medical practitioners of Charing-cross Hospital, of the Westminster Hospital, of St. Thomas's Hospital, of Guy's Hospital, of King's College Hospital, of the Middlesex Hospital, and of St. Bartholomew's Hospital; also from the medical practitioners of Woolwich, Brighton, Southampton, and various other places. In presenting a similar petition from the Royal College of Surgeons in London, his Grace called particular attention to the allegations which it contained, and expressed a strong opinion that the prayer of these petitioners ought to be granted. The Earl of MINTO contended that many great misapprehensions existed upon this subject, and as many in the Royal College of Surgeons as in other quarters. A new arrangement had been made, whereby a double cabin was allotted to this class of officers, in order to enable them to pursue their studies; but in many ships he was sorry to say that the assistant-surgeons had declined to avail themselves of it, and in others it had been converted into a store-room. He believed that a portion of the "sick bay" was now to be appropriated to their use.

THE MIDDLESEX HOSPITAL ANNIVERSARY DINNER.

ON Friday last the annual dinner in aid of the funds of the Middlesex Hospital was held at the Freemasons' Tavern, and was very well attended. About 120 gentlemen sat down to an excellent entertainment, the chair on the occasion being occupied by the Marquis of Westminster. From

the report it appears that the great improvements and additions recently undertaken by the governors of the hospital have been satisfactorily completed; that they embrace a thorough system of ventilation, a laundry-room for superior nurses, fire-proof staircases, and other arrangements. In the execution of these changes a large outlay has been incurred, which has been defrayed out of the accumulated funds of the hospital; and the report states that an additional sum of at least £550 per annum will be required to raise the income of the hospital to what it was before the alterations were commenced. By the new arrangements further accommodation has been acquired for 40 patients, exclusive of those in the Murray ward, so that there are now 285 beds instead of 230, the former amount. While this increased accommodation increases the claims of the institution on public support, it is a melancholy fact that even now the governors are compelled, in consequence of the want of room, to refuse many applicants for admission. The report states that not more than one-third of the income of the hospital is derived from the interest of its vested capital, and that upwards of £400 per annum beyond the ordinary income derived from that interest, and from the present annual subscriptions, will be required in order to give those who need it the full benefit which the institution is now able to confer. Every form of disease finds its appropriate treatment in the Middlesex Hospital, and here a permanent refuge has been provided for the unfortunate victims of that dreadful malady, cancer. Upon these and similar grounds the Marquis of Westminster made a strong and effectual appeal to the charitable feelings of the guests. The secretary announced during the evening subscriptions amounting altogether to £1700.

OBITUARY.

We regret to announce the somewhat sudden death of Dr. Bardsley, whose name was so many years connected with the practice of medicine, and especially with the medical charities in Manchester. He had been, we understand, in apparent good health, and was on a visit at the house of a friend at Brighton, where he died after a very short indisposition. Dr. Bardsley had just completed his 87th year.

On the 25th of December, 1849, at Geelong, Australia, on board the *Abberton*, Mr. Charles Jennings, surgeon, aged 24, youngest son of the late Mr. Robert Jennings, of 62, Chesapeake.

On the 5th inst., at his residence, Croom's Hill, Greenwich, Frederick Finch, Esq., M.R.C.S.; aged 62.

STATUE TO GAY-LUSACC.

THE President of the French Republic, greatly to his credit, has ordered that a bronze statue shall be erected to the memory of the eminent Chemical philosopher, Gay-Lussac. In England, in order to obtain this posthumous honour, a man must attain high rank as a politician, or as a naval or military commander.

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, June 8.

BIRTHS.		DEATHS.	
Males...	720	Males...	420
Females...	638	Females...	424
1358		844	

CAUSES OF DEATH.

ALL CAUSES	844
SPECIFIED CAUSES	837
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases...	172
<i>Sporadic Diseases, viz.:</i>	
1. Dropsy, Cancer, &c.	26
2. Brain, Spinal Marrow, Nerves, and Senses	118
4. Heart and Bloodvessels	26
5. Lungs and organs of Respiration	94
6. Stomach, Liver, &c.	59
7. Diseases of the Kidneys, &c.	4
8. Childbirth, Diseases of Uterus, &c.	18
9. Rheumatism, Diseases of Bones, Joints, &c.	6
10. Skin	2
11. Old Age	22
12. Sudden Deaths	10
13. Violence, Privation, Cold, &c.	0

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox	9	Convulsions	30
Measles	26	Bronchitis	35
Scarlatina	19	Pneumonia	45
Hooping-cough	25	Phthisis	141
Diarrhoea	19	Lungs	6
Cholera	2	Teething	10
Typhus	39	Stomach	6
Dropsy	7	Liver	11
Hydrocephalus	28	Childbirth	10
Apoplexy	25	Uterus	5
Paralysis	22		

REMARKS.—The total number of deaths was 13 above the average mortality of the twenty-third week of five previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.67
 " " " Thermometer 59.3
 Self-registering do. " Max. 105° Min. 35°
 " From 12 observations daily. " Sun.

RAIN, in inches, 0.08.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 1° above the mean of the month.

NOTICES TO CORRESPONDENTS.

The statement forwarded to us by a respectable contributor in Cornwall might, if published, subject us to an action for libel. We, however, quite agree with him, that a man of no reputation, provided he has a hard German name, and affects singularity, stands a very good chance of passing himself off as a "celebrated" character in this country.

Mr. E. Lee.—The book can, no doubt, be procured through Mr. Baillière.

The King's College Hospital Report has been received.

RECEIVED.—Mr. Wallis.

Lectures.

LECTURES.

ON INFLAMMATION,

(Delivered in the Theatre of the Royal College of Surgeons of England).

BY JAMES PAGET,

Professor of Anatomy and Surgery to the College.

LECTURE III.

Developments of the lymph-products of Inflammation—General meaning of 'development'; limitations with which the term is to be used in regard to some tissues—Conditions of its occurrence in lymph—Necessity of the cessation of the inflammation—Conditions determining the direction of the development—Respective influences of the nature of the lymph itself, and of the tissue in or near which it is placed—Participation of the lymph in the properties of the normal blætema of the inflamed tissue—Developments into fibro-cellular, fibrous, epithelial, osseous, and other tissues—Developments of blood vessels and lymphatics in lymph—Time requisite for development of blood-vessels.

IN the last lecture I spoke of the lymph effused in inflammation as presenting certain primary forms, the fibrinous and corpuscular, from which, by their various developments and degenerations, are derived those other structures, which are characterized as products or results of inflammation; such as, through development, adhesions, indurations, and the like; through degeneration, pus, ichon, granule-cells, &c. It is in the biography of the lymph-product that much of the most important part of the pathology of inflammation is comprised: and if it were required to point out what, since Hunter's time, has contributed most to the progress of general pathology, one could scarcely hesitate to name the full appreciation of the fact, that lymph, like the other primary products of disease, has an independent life, and is of its own nature capable of appropriate development, degeneration, and disease. We may regard this as one of the best achievements of the observations which Schleiden and Schwann began to generalise; for, till it was clearly apprehended, the idea of a part being organised meant scarcely more than that it admitted of being organized

by the forces of the parts around it; that it could be built-up by the arteries, and modelled by the absorbents, as a material pliant, yet passive, in the hands of workmen. Hence was derived the erroneous direction of inquiries; which sought for blood-vessels as the essential characters of organic life in a part; and for their varieties of size, and number, and arrangement, as the measures of the ability and method of development.

But now, more truly, we may study lymph as having a life only so dependent on the blood and vessels as are all the tissues of the body—dependent on them as conditions of existence, but not as sole arbiters of the method or direction of the vital transformations. And I venture to think, that the chief aim of our observations in the pathology of inflammation should be to learn, now, the exact relation in which the several products of inflammation stand to certain primary forms, as developments or degenerations from them. The catalogue of various corpuscles is already swollen to an extent that is confusing to those who are familiar with them, and repulsive to those who would begin to study them. It would be an easy task to increase it, and it might have a seeming of accuracy to do so; but what we want, is such a history of lymph that we may arrange the components of this catalogue as indicating so many progressive stages of development, degeneration, or disease, in the primary products of inflammation. An attempt to construct such a history is the more advisable, for the sake of the illustration which it may afford to the history of normal structures. There are no normal instances in which we can see the materials that are effused for the nutrition of parts; but we may assume something concerning them and their progressive changes from the analogy of the materials that are more abundantly produced in inflammations.

I propose to devote the present lecture to some general,—and only a very general,—account of the developments of lymph. But let me first state the sense in which the term development is here to be employed. By development of a part, speaking generally, is understood "the process by which an organ or tissue is first formed; or by which one, being already imperfectly formed, is so changed in shape or composition, as to be fitted for a higher function; or, finally, is advanced to the state in which it exists in the most perfect condition of the species."* In the use of this definition we shall find that we have adopted

*See Lectures on Nutrition, &c., in the MEDICAL GAZETTE, 1847.

an arbitrary standard of comparison, on the assumption that the nearest approach to organic perfection is in the human body, at the age of manhood. The assumption may be right on the whole; and a less arbitrary definition of development would, probably, be less useful; yet it may be observed, that in what we take for the period and standard of perfection, many parts that were once highly organized and active have passed away, as the thymus gland; and some are, in certain respects, rather degenerated than developed, as the renal capsules and the bones.* We cannot unconditionally call that change a development, in which a part acquires a new chemical composition less remote from that of inorganic matter, as bone does when its chondrine is replaced by gelatine, and when this becomes impregnated with abundant saline and earthy matter, and leaves spaces filled with fat. Neither is that change altogether development, in which, as in the formation of ligamentous tissue, the organic life of the material becomes less active; or which, like ossification, can be accomplished as well in the feebleness of advanced life, as in an earlier period; as well in disease as in health. Development, in its highest sense, should imply not merely that a part becomes more fit for membership under the most perfect economy, but, also, that such fitness is acquired with greater complexity of chemical composition, or with greater evidence of formative or other organic power, or with greater difference from the structure or composition of lower beings. With none of these characters of development does such a process as that of ossification agree; and, therefore, when we call it the 'development' of bone from cartilage, it should be with the understanding that the term is applicable only because bone is the proper material of the skeleton of the adult human body.

This distinction is important in the pathology of inflammation. In all true or complete development we may believe there is a larger expenditure of vital force than in any other organic act; for all such development, too, the external conditions need to be the most complete, and the least interfered with; such development is the highest achievement of the vital force—the highest instance of what might be understood as 'increased action' in a part. It is in accordance with this that, in general, development is arrested in every severe disease, and that the residual capacity of repair, and other organic processes, is, in each species, inversely proportionate to the amount of original development, or, to the

distance between the embryonic and the perfect forms of the species.

To speak, therefore, of the development of inflammatory products, when already the normal development of the body is completed, may seem to imply the exercise of unusual vital force—the renewal, as it were, of the pristine embryonic vigour—and the existence of conditions more favourable for nutrition than even those of health are. But we may be led to judge differently, if it should appear that most or all of the so-called developments of inflammatory products are instances in which the tissues, though they are formed into the likeness of such as exist in the perfect human frame, yet acquire characters of lower organization than those they had in their earliest state. It will appear that they are such; and that however much the inflammatory products may become, by their changes, better suited for the general purposes of the economy, they are, in relation to their own condition, rather degenerated than developed. The changes that they undergo are, therefore, not always declaratory of a large expenditure of vital force; they are not such as the term 'sthenic,' applied to the inflammatory process, would suggest; not such as to imply that it is an exaggeration of any normal method of nutrition.

With this understanding, however, the changes I shall presently describe may be called developments of inflammatory lymph or exudation; they are developments in the sense of being approximations to the likeness of the natural tissues of the adult human body.

In the last lecture I spoke, generally, of the conditions upon which depends the production of such inflammatory lymph as may be most apt for development. They are all such as favour the production of a lymph rich in fibrine, and that fibrine clear, homogeneous, elastic, tough, and filamentous.* But even such lymph as this may altogether fail to be developed, or may be arrested in any stage of its development, and turned into the downward course of degeneration, unless favourable external conditions are present with it. For the development of lymph, of whatever form, nearly all those conditions are requisite, which are necessary for the normal development of the proper constituents of the body. It needs, in general, the due supply of healthy and appropriate

* When fibrine is thus spoken of, one does not refer to the chemically pure fibrine which may be obtained by art, and which, most probably, could not be organized; but to the compound in which fibrine is naturally mixed with fatty, extractive, and saline matters, all of which, we may believe, are as necessary to right development as itself is.

* See Lectures on Repair, in MEDICAL GAZETTE for 1849.

blood, the normal influence of the nervous force, and, for the highest and latest forms of development, the normal condition of the proper elements of the affected part.

Now the existence of these conditions for the development of lymph implies a cessation of the inflammatory process, and a recovery from whatever originated or maintained the inflammation. So long as inflammation lasts, no high development of the exudation already formed will take place; rather, fresh exudation will be continually formed, hindering the due process of development, and hindering it the more, because, as the general health suffers through the continuance of the disease, so the lymph freshly formed will be less and less prone to organization. We may see this illustrated in bad cases of pleurisy: the layers of lymph next to the pleura are always more prone to organization than the later formed layers that lie next the cavity; while within the cavity all the lymph may retain its fluid form, or may have degenerated into pus. So, more openly, we may see an illustration of the ill effects of abiding inflammation, in the healing of wounds by granulations. An inflammation ensuing or continuing in the wound hinders all development of granulation-cells, even though it may be too slight to hinder their formation, and may be favourable to the production of the ichor and pus-cells. We may truly say, that the conditions most favourable to the production of lymph are among the most unfavourable to its development, *i. e.* to its complete and higher organization.

Even when the inflammation has ceased, and fresh exudation is not formed, still the development of the lymph is often prevented or retarded by want of some necessary condition. The blood-vessels, long dilated, may remain in a state of congestion, distended as if paralysed, and filled with slowly moving blood. In such a state—the state of ‘passive congestion’—so apt to follow more acute attacks, development will not happen in even well-disposed lymph. We have parallel facts in the tardy development of granulations on the legs, as in the healing of ulcers; and how much this depends on the defective movement of the blood is well illustrated by a specimen* appropriate to an observation of Mr. Hunter’s. It shows three ulcers of the integuments of a leg; they are all granulating, and all healing; but their progress in healing has been inversely proportionate to the hindrances of the blood. The lowest of the three, that most distant from the heart, and of which the vessels were subject to the pressure of

the highest column of blood, is least advanced in healing; while the uppermost of the three is most advanced, and is nearly cicatrized.

But let us suppose all the conditions for development provided: what will now determine the direction or result of the process? Into what tissues will the lymph be formed? Two chief things will determine this: first, the natural tendency of organizable lymph, produced in inflammation, is to form filamentous, *i. e.* fibro-cellular or fibrous tissue; and, secondly, all lymph has some tendency to assume, sooner or later, the characters of the tissue in or near which it is seated, or in place of which it is formed.

The natural tendency of lymph to the construction of fibro-cellular or connective tissue, such as composes false membranes and adhesions, and most thickenings and indurations of parts, is shown by the production of this tissue under all varieties of circumstances, and in nearly all parts; even in parts which, naturally, contain little or none. Thus, it is found in the brain, and in glands, as in the testicle; within joints, even where adhesions only pass from one articular cartilage to another; in the adhesions and thickenings of the most diverse serous membranes; in the thickenings of the most diverse mucous ones. And with all these, we have corresponding facts in the healing of wounds: all granulations, springing from what surface they may, tend, at least in the first instance, to the formation of filamentous tissue, such as we see uniting all parts in a stump; and a large proportion of subcutaneous injuries are repaired by similar tissue, whatever parts may have been divided. And sometimes we may find instances of this development where the lymph is not even in continuity with any tissue, but floats free; as in ascites, or in effusions into joints.

But besides this general tendency, we may recognize in lymph a disposition to assume characters belonging to the part in which it was produced; so that, for instance, that about fibrous and ligamentous parts will be developed into peculiarly tough fibrous tissue; that about bone will become osseous; that in the neighbourhood of epithelium will form for itself an epithelial covering; and so on. I referred to this fact in the last lecture. The conformity of the developed lymph to the characters of the parts around it is usually ascribed to an assimilative force, exercised by those parts after the effusion of the lymph, and during its development. But it seems more probable that the tendency to conformity is from an original and inherent quality of the lymph; the material formed

* Mus. Coll. Surg. No. 36, Catal. vol. i. p. 15.

in the inflammation of each part partaking, from the first, in the properties of the natural products of that part, properties which, we know, determine the mode of formation in the natural process of nutrition, independently of any assimilative force.

As I stated in the last lecture, the degree in which lymph will partake of the properties of the natural product of the part will bear an inverse proportion to the severity of the inflammation; because the more the normal conditions of nutrition are deviated from, the more will the material produced be unlike the normal product. And when the conditions are restored to the normal type, so will the organized product of inflammation constantly approximate more and more to the characters of the parts among which it is placed, or with which it has acquired membership. As scars improve, *i. e.* gain, gradually, more of the characters of skin, so do false membranes and the like acquire, by their own nutrition and development, more nearly the characters of the parts with which they are connected. Thus false membranes in the serous cavities acquire a covering of epithelium, exactly like that which covers the original serous membrane, and their tissue becomes perfectly fibro-cellular: thus too, adhesions of the iris may become black, apparently from the production of pigment-cells like those of the uvea; thus, too, in adhesions of the pleura, even when they are long and membranous, pigment may be formed as in the pulmonary pleura itself;* and thus many other products are gradually perfected, till we may come to doubt whether they be of normal or of morbid origin, so complete is the return from the aberrant action.

I will endeavour, now, to describe more particularly the modes of development into the several tissues that may be formed from lymph. And here I may refer to a part of the lectures I had the honour of delivering last year, in which I spoke of the two different materials produced for the repair of subcutaneous and of open wounds. The material for subcutaneous wounds appears to be a nearly unmixt fibrine, and is comparable in appearance, though not in origin, with the best forms of fibrinous lymph: the material for open wounds, such as granulations are formed of, consists almost exclusively of cells, and is equally comparable with the corpuscular lymph of inflammation. I then also described the respective methods of development, through which these two materials are transformed into the several permanent tissues of repair; and especially described how similar fibro-

cellular and fibrous tissue may be formed from them both, by different routes of development. Such tissue is formed from the fibrinous material by the production of nuclei, constituting the 'nucleated blastema,' and from the granulation-cells by their elongation and attenuation into filaments.

I believe that corresponding methods of development are observable in the two similar forms of inflammatory lymph; that the fibrinous becomes a nucleated blastema, in a stage previous to the formation of the fibro-cellular tissue; and that the corpuscular lymph is developed through the elongation of its cells.

Now these are the recognised methods by which the normal fibro-cellular and fibrous tissues are developed; that through nucleated blastema is the method described more particularly by Henle; that through the elongation and attenuation of nucleated cells is the method first described by Schwann; and, probably, where this last prevails, we may assume that, very often, while cells are elongating into filaments, the intercellular substance, which is sometimes abundant, is assuming the same filamentous character. Such a combination of the two methods of development may be assumed for all those examples of lymph in which the fibrine and the corpuscles are mingled.

I need not, at greater length, describe these well-known methods of development. It may suffice to say, that after presenting transition-stages in exact conformity with those observed in the normal development of the like tissues, the lymph of inflammation may become perfect fibro-cellular or fibrous tissue. The imitation, in adhesions of serous membranes, in the indurated ligamentous substance formed in and about muscles, tendons, and the like, is perfect. And if it should seem strange that disease should thus so closely imitate health, the explanation is, that this process in lymph is not disease. The lymph is, indeed, produced in inflammation, but it is developed in health, when all the natural conditions of nutrition are restored.

It would be tedious, and quite unnecessary, to enumerate all the particular forms in which lymph developed into fibro-cellular and fibrous tissues may present itself. The general forms are—1. adhesions, where the tissue is between free surfaces, and unites them; 2. thickening, where the formation is in the substance of membranes; 3. indurations, with or without contractions, where the tissue is formed in the substance of organs; 4. opacities of parts that were transparent. All these are minutely described in the standard works on pathology and morbid anatomy.

* As in No. 96, in the Museum of the Collège.

The numerous varieties of tissue that may be included in the class of fibro-cellular and fibrous tissues comprise nearly all the normal structures that can be formed from the lymph of inflammation in man. Besides these, indeed, none are certainly formed except the structures of epithelium and bone.

Epithelial cells, we know, are formed of the cells of granulations in the "skinning" of sores, and they present a striking instance of the purpose observed in the healing process; for cells are here, as with design, formed into epithelium, while cells like them, more deeply seated, are being developed into filamentous tissue. The cells of lymph are so like those of granulations, that we should be justified in believing that they also may be developed into epithelial cells, even if the opportunities of tracing the process were rarer than they are. We may sometimes find, in inflammation of serous membranes, recent lymph-cells presenting many characters indicative of development towards epithelium, flattening and enlarging, and acquiring circular or oval, clear nuclei. On old false membranes, epithelial cells are perfectly formed; but these may have been produced after the complete organisation of the membrane.

Bone is often formed from lymph. It may appear as a late transformation of lymph that has been organised into perfect fibrous tissue, as in the osseous plates that are sometimes found in the false membranes of the pleura, or in the pericardium. But in most of these there is not true bone, but an amorphous deposit of earthy matter, which is imbedded in the fibrous tissue, or which (as Rokitsky holds) is the residue of the degenerated and partially absorbed tissue.

The proper condition for the transformation of lymph into bone is that in which the exudation takes place in an inflammation seated in or near the periosteum. Such inflammations have been called "ossific;" and the museum of the College, like every other, abounds with specimens of their various results. The second and fifth volumes of the catalogue of the museum contain such detailed descriptions of these specimens, that I need only mention some general principles which they illustrate.

We have evidence enough that superficial deposits of new bone are formed as well after inflammation of the periosteum, as after inflammation of the bone itself; or even more constantly. And we might expect such a result, knowing, from Dr. Sharpey's and Kolliker's researches, that the growth of bones in circumference is accomplished by the ossification of successive layers of fibrous tissue, like the periosteum,

and that such fibrous tissue is one which the developed products of inflammation may imitate. It is to the ossification of such fibrous tissue, formed (though probably only in rudiment) in periostitis, that we may ascribe the greater number of superficial formations of new bone, and more especially the thin plates of bone that are sometimes imbedded in the periosteum, or even on its exterior, and completely detached from the surface of the bone.

It is also worth observing how characteristic of different diseases are certain formations of new bone produced in inflammations. The pustules of variola, or the vesicles of herpes, are scarcely more characteristic of those diseases, than are the hard nodules of cancellous bone clustered about the articular borders of bones that have been the seat of chronic rheumatism,* or the porous, friable, dirty, and readily ulcerating thin layers formed on the shafts in syphilis,† or the circumscribed, flat elevations of bone formed under old ulcers of the integuments.‡

I am not aware that the mode of ossification which prevails in any of these cases has been minutely studied; but we may believe the ossification of inflammatory products to be essentially similar to those observable in the repair of fractures. It is probable that cartilage is very rarely, if ever, formed in inflammatory lymph; for it seems to be formed in the repair of fractures only when the conditions are more favourable than they are likely to be in any inflammations. Probably, therefore, the lymph is more or less developed towards the fibrous tissue when it ossifies; and, as in the repair of fractures, so here, we may believe that ossification may be postponed till the fibrous tissue is quite formed, or that it may ensue in the rudimentary state of the tissue, whether in a nucleated blastema, or in cells like those of granulations.§

Such are the developments of which lymph appears capable in man; and I doubt whether any other tissues are ever formed from its materials. All the instances in which it has been said that transversely striated muscular fibres were formed seem questionable. The formation of the tissues of the internal membrane of bloodvessels is probably accomplished by development of fibrine-deposits from the blood flowing in the vessels whose walls are thus thickened; at least, their formation

* As in 572, and others, in the museum.

† As in Nos. 636 to 661.

‡ As in Nos. 581 to 585, and others.

§ These subjects are more fully treated in the Lectures on Repair published last year.

from lymph deposited from the *vasa vasorum*, as in phlebitis, has not been nearly proved.

The formation of the proper bloodvessels of organising lymph is, I believe, not from the materials of the lymph itself, but by outgrowth from the vessels of the adjacent part; but on this point I must say something more, if only because different opinions are held by some of the highest authorities.

The question is, whether the bloodvessels of organising lymph are formed entirely of the material of the lymph, and, as it were, by its own power of development, or whether they are outgrowths from adjacent natural or original vessels, which, as the expression is, shoot-out into the lymph. Both these modes of formation of bloodvessels are observable in the natural tissues while they are in process of development; the new vessels which are formed in the interstices of the embryo tissues being usually produced by development of some of the interstitial cells; while those which are formed at borders or surfaces appear as usually to be produced by outgrowth from subjacent vessels.* Mr. Hunter, guided by the analogy of the formation of the first bloodvessels in the germinal area of the embryo-chick, was induced to think they must be similarly formed in lymph; and that from its materials both blood and enclosing vessels may be constructed, as it were, in an isolated system, which, at a later period, opens into communication with the vessels and moving blood of the adjacent parts. Rokitsansky, and many others, hold the same opinion; while Mr. Travers, Mr. Quekett, and many others, maintain that the lymph forms neither vessels nor blood, but receives those that are projected into it from the parts on or in which it is placed. With this view I fully concur, resting on several grounds:—

1. The direct observations supposed to prove that blood is formed in lymph are very liable to fallacy, through the facility with which blood may be accidentally mixed with the lymph, in consequence of hæmorrhage during life or after death, or in the preparation of the specimens. Where these sources of fallacy have been avoided, I have never seen anything suggestive of a transformation of lymph into blood.

2. The development of blood from tissue-cells is limited, naturally, to the earliest period of embryo-life, as if it needed the greatest amount of force for development; afterwards, blood is not formed except through a long process of elaboration, and with the aid of many organs. Its formation, therefore, in the mal-conditions of inflammation is very improbable.

3. In no specimen of inflammatory lymph have I seen appearances of transitions from lymph-cells to blood-cells, such as we may see in the lymph of the lymphatics, both before and after it is poured into the bloodvessels.

4. Neither in any lymph have I seen appearances of such stellate cells as the interstitial bloodvessels of the early embryo are formed from; nothing comparable with them have ever come into view.

5. In the formation of vessels for granulations and the walls of chronic abscesses, all is favourable to the belief that they grow-up from the bloodvessels of the adjacent parts; and there are no structures to which the lymph bears so close analogy as it does to these, or to which it is so likely to be conformed in the production of its vessels.

On the whole, although direct observations are wanting, I think we may conclude that all the vessels of inflammatory lymph are formed by outgrowth from adjacent vessels. The process we may believe to be similar to that seen in the formation of vessels along the border of the growing tadpole's tail, or at the edges of the healing wound in the frog's web. On certain points of some vessel slight lateral dilations appear: these extending acquire the form of pouches or diverticula, which, continuing to grow out, at length bend towards each other, meet, and coalesce, so as to form a new vascular loop, an outgrowth from the vessel on which they arose. From such a loop a new one may be formed: and by similar coalescing outgrowths channels may be formed between adjacent vessels, or when two surfaces of lymph or granulations come in contact, their several vessels may be thus by intermediate projections joined. Thus granulations are united in the healing of wounds by secondary adhesion; and thus the adhesions formed in inflammations of serous membranes introduce anastomoses between the visceral and parietal bloodvessels.

In the first instance, the bloodvessels of lymph appear to be usually very numerous and thin-walled; therefore easily bursting, or dilated by congestions during life, or in the attempt to inject them after death. The College-collection contains an extremely beautiful specimen of soft recent lymph from the pericardium of a Cheetah, the vessels of which, injected by Mr. Quekett, appear as numerous and close-set as those of some of the more vascular mucous membranes. They present occasional slight and gradual dilatations, especially when they branch or anastomose. But after an uncertain time, as the lymph becomes more highly organised, so its vessels waste and diminish in number; and while it acquires

* See further, in the Lectures on Repair.

the proper structure of the fibro-cellular tissue, so it descends to the low degree of vascularity of that tissue. The vessels of false membranes are usually rather wide apart, long, slender, and of uniform diameter. In all these particulars they differ from those of more recently vascularised lymph; and their changes are, in these respects, parallel with those of the vessels of granulations during the gradual formation and perfecting of scars.

Perhaps the most perfect instance of the conformity with the natural tissues of the body to which the developed lymph can attain, is manifested in its acquiring a supply of lymphatic vessels. We owe the knowledge of the lymphatics of false membranes to the masterly skill of Professor Schroeder van der Kolk, whose preparations of them are described and represented by his pupil, Dr. de Lespinasse.* Beautiful networks of lymphatics, with their characteristic beaded forms and abundant anastomoses, are shown traversing adhesions extending between two lobes of a lung, and between a liver and the peritoneal covering of the diaphragm; while yet closer networks are seated in the thickened and opaque-white substance of the pleura, or of false membrane covering it, beneath the adhesions.

It seems to be in only the most perfect state, and when bloodvessels have long existed, that lymphatics are formed in false membranes. In recent lymph S. v. d. Kolk has never succeeded in injecting any; and we can only suppose that they are, like the bloodvessels, produced by outgrowth from the lymphatics of the membrane with which they are connected.

The time in which these complete developments of lymph may be accomplished must vary so much, according to the circumstances of the cases of inflammation, that perhaps no reasonable estimate of it can be made. The experiments of Villermé and Dupuytren† upon dogs assign twenty-one days as the earliest time in which new vessels are formed; but I am disposed to agree with Dr. Hodgkin, that a shorter time is sufficient. On the other hand, I am sure that the supposition of their being formed in one or two days is incorrect. The principal case in support of this opinion is that recorded by Sir Everard Home; but the specimens preserved in the College museum‡ show that he was

deceived as to the true nature of the case. He says* that he operated for strangulated hernia in a man, and found in the sac a portion of ileum, which was healthy, except in that its vessels were turgid with blood. The patient died twenty-nine hours after the operation; and on examination "several small portions of exuded coagulated lymph" were found adhering to the intestine that had been protruded. When the vessels of the intestine were injected, the injection passed into vessels in all these portions of supposed lymph, each "having a considerable artery.....and a returning vein." Sir Everard Home, therefore, concludes "that the whole operation of throwing out coagulable lymph, and supplying it with bloodvessels after it had become solid, was effected in less than twenty-four hours."

Now, one of these specimens was figured by Mr. Hunter,† "to show a small portion of coagulating lymph.....which is supplied with vessels;" but neither here, nor in his manuscript catalogue, does he allude to a probability of the vessels having been formed in twenty-four hours, although, had he believed it, he would scarcely have failed to record it.‡ An examination of the specimens shows that the small shred-like portions of membrane, attached by little pedicles to the intestine, have not the appearance of recently coagulated lymph, but are fully organised, with traces of filaments and fat-cells. They are also very regularly disposed, at distances of from half an inch to an inch from each other, and are nearly all placed in two rows on each side of the intestine, about half an inch from the attachment of the mesentery, like very minute appendices epiploicæ, such as are occasionally met with on the coats of the small intestine. Whether they be such appendices or not, it is in the highest degree improbable that they were formed after the operation; especially since they are too minute and delicate to have prevented the intestine from exhibiting, when exposed in the sac, the natural polished appearance of its surface.

I am not aware of any other case adapted to prove the earliest period at which bloodvessels may be formed in lymph. Serous surfaces may, indeed, become adherent in twenty-four hours, but this does not imply vascularity of the lymph between them; it is simply adhesion by the coaptation of the intermediate lymph.

* In his Dissertation on Pus, p. 41. The whole case is given in the College Catalogue, vol. i. p. 37.

† On the Blood, pl. vi. fig. 2.

‡ In the same work (p. 350) he speaks of nine days as a short time for the complete organisation and adaptation of adhesions.

* Spec. Anat. Path. de Vasis novis Pseudomembranarum, 8vo. Daventrie, 1842, figs. iii. iv.

† Quoted by Dr. Hodgkin in his Lectures on the Morbid Anatomy of the Serous Membranes, p. 30.

‡ Nos. 81 and 82 in the Pathological Museum.

Original Communications.

THE

CHOLERA IN PLYMOUTH.

By WILLIAM F. SOLTAU, M.B.

2 Coll. Ball. Oxon.

[Continued from page 1032.]

THE interesting researches recently made by Dr. Snow into the spread of cholera, and its mode of communication, were partly suggested by the remarkable phenomena already alluded to; and if his theory be correct, that water is the great menstruum in which the *materies morbi* is dissolved, and whereby it is diffused, it will be another proof that the conclusions of the ignorant, if deduced from facts, will often, by the wisdom of the wise, be proved to contain some portion of truth as well as error. The poison which the ignorance of the lower orders attributed to the murderous intentions of a most harmless sect, he has assigned to a source as more probable as it is charitable. Water by both is assigned as the means whereby it is conveyed: the difference between the two is its method of impregnation. The theory of Dr. Snow is too well known to the readers of the GAZETTE to be referred to in detail. Suffice it to say, that he believes that the cholera is communicated by something which acts directly on the alimentary canal. The *materies morbi* he imagines to be contained in the excretions of the infected; so that if, from want of cleanliness on the part of those attending them, or from any possible admixture of their evacuations with what is taken into the system in the way of food, this is imbibed, it forthwith produces its poisonous effects on the economy. Now as water is the commonest commodity of life, he looked to it as a very probable source of conveying the poison, especially when it is remembered that badly constructed drains are frequently placed in the vicinity of wells or tanks; so that if, through any leak, there be an escape of the contents of the former, they find a ready access into the latter. This theory would account for the rapid spread of the disease after its first appearance in any crowded locality. As

far as the particular district was concerned that was confided to my care during the prevalence of cholera, I was not able to explain its communication in the above manner. The water in most of these streets is conveyed to the several houses in *iron pipes, placed above the drain*, and received into tanks of various make and size, but all of them placed above the level of the court in which the open drain is situated. It would be difficult, therefore, to explain how, under these circumstances, it could be contaminated by any admixture with the contents of the drain. I am now only speaking of what was the result of my experience, as my attention was drawn to the point after reading Dr. Snow's very interesting suggestions during the prevalence of the disease amongst us; but, as I before stated, Dr. Snow does not confine the source of communication to water. It may be remembered that in the first paper* which I wrote on the subject, I mentioned a sudden outbreak of cholera in Higher Street, and that the second person attacked was the wife of a milkman. I did not think it necessary then to refer to a report which prevailed in the town, to the intent that the milk was the mode whereby the disease so rapidly spread. As, however, it appears that, in a lecture delivered at one of our public institutions, this opinion was expressed and discussed, and found its way into our local papers, it will be necessary to say a few words on the subject. The facts were the following:—An old woman, of eccentric habits, who occupied a room in the house referred to, was taken ill with cholera, but refused to admit any person to visit her; nor was it until a ladder was obtained, and admission gained at the window, that the nature of her malady was known: she was then collapsed, and soon died. Now the room she lived in was above a dairy. The wife of the milkman was the second person seized, and within twenty-four hours between forty and fifty cases occurred in the adjoining houses. It was immediately conjectured that the milk had been the means of communicating the poison. An intelligent and active tradesman of this town,† who devoted all his time, during the prevalence of

* MEDICAL GAZETTE, p. 53.

† Mr. Morriah, of Bedford Street.

the cholera, in bettering the sanitary condition of the localities that were visited by it, by removing nuisances, emptying cesspools, &c., informed me that, on hearing the above report, he immediately visited the house, to learn whether there was or was not any ground for it. He first inspected the dairy. Now the house, in its every compartment, had been white-washed at the first outbreak of the epidemic, and the ceiling and walls of the dairy with the rest. He said he felt satisfied that if any fluid had escaped from above through the boards, it would have left a stain on the white-wash. This, therefore, in every part, he most carefully examined, but no mark or spot could he discover. He felt, therefore, certain that, if the milk had been poisoned, it had not been in the manner first conjectured — namely, by the discharge having oozed through the floor above, and thus dropping into the milk below. Having settled this point, he next made inquiries as to the parties who had partaken of the milk, and who had therein been attacked by cholera. It is remarkable that the house adjoining that in which the milkman lived was the one most severely visited, and presented a *primæ facie* case in favour of the report. There were at that time no less than sixty-five persons residing in this house: out of these, about thirty-five were seized with the disease, and nineteen died. It was but natural to suppose that, living next door to a dairy, they would purchase their milk from thence. On inquiry, however, the person above referred to told me he discovered that such was not the case. It appeared (if the evidence of the milkman is to be believed) that he had for some time refused to supply any of these persons with milk, as they owed him money, which he was unable to obtain from them. They, therefore, were in the habit of procuring the same from a shop at the other end of the street. This account of the milk satisfied me that there was little dependence to be placed on the report which had ascribed to its agency the sudden spread of the cholera in Higher Street. It is clear that, had the milk been infected, the point in which it had imbibed could not have escaped through the ceiling, or a stain would have been left marking its point of exit: it must therefore, if present, have been imparted to it in some other way. It

is necessary, however, first to prove that the "post hoc propter hoc" in this case has been properly argued out. An instance or two may possibly be discovered where persons who partook of the milk were attacked by cholera; but this does not necessarily imply that it was the means whereby the cholera was communicated, especially when it can be proved that others who drank of it were not affected, and many more who never touched it were severely visited by the disease. A case like the above, to be proved at all, must be subjected to the most rigid inquiry. For the sake of truth, and the credit of science, every recorded fact must be sifted, till it either itself falls before, or makes fall before it, every possible objection brought to bear against it. If, as Dr. Snow supposes, the cholera virus is contained in the evacuations of the infected, the microscope ought ere this to have detected the same. The discovery of Messrs. Brittan and Swayne would have tended to strengthen his explanation of the spread of cholera; but, as their conclusions are now questioned, they to a certain extent invalidate those of Dr. Snow. It would be difficult to account for the spread of cholera on board ship solely on the theory which he has propounded. The boundless ocean is the great sewer which is destined to receive the drainage of the ship, and the water for general use is preserved in tanks which could by no means be impregnated by substances from without. Nor would a want of cleanliness sufficiently account for this sudden outbreak of the disease amongst so many at the same time. These objections are offered in all due respect, and may perhaps be easily answered by the author of the above theory. They occurred to me when perusing his pamphlet, and I have therefore ventured to introduce them here. One thing, however, is certain, that we are agreed on this point — namely, the communicability of cholera from the infected to the healthy; or, in other words, that it spreads by infection. Messrs. Brittan and Swayne evidently came to this conclusion from what they had witnessed in the progress of the disease, and, in their interesting investigations, sought for the mysterious leaven which thus rapidly leavens so large a lump.

It would be as interesting as important to know the joint opinion of the

profession on this head. I believe that most of the medical men in our town are on the side of the contagionists. With some there appears to be a resolute determination not to be persuaded, however strong the evidence may be, in favour of the infection of cholera: they consider that such a conclusion is most fatal to the interests of society, and, if once allowed to be true, would greatly tend to increase the disease, by the panic it would occasion in the public mind. Whatever plausibility there may be in such reasoning, yet it is founded on most dangerous premises. If truth is to be received or rejected according to the good or evil consequences which may result from its avowal, then there is nothing of intrinsic value in it. If expediency is to be made the test whereby its genuineness is to be examined, and if all is to be considered as dross which does not respond to that, then will error soon be predominant, and truth for the most part be cast aside.

Let us, then, put the case once more. A town is visited by a severe epidemic, which spreads rapidly in every district where there is any means of communication between the sick and the healthy. Persons leave an infected town in health, seeking a place of refuge in different directions: they reach a place that is quite healthy, and there take up their abode. After a few hours' residence therein, some of them are taken ill with the epidemic prevailing in the town which they had left. After them the people in the houses into which they have been received are similarly affected, and in a short time the disease spreads to the several families in the immediate neighbourhood. What conclusion would any reasonable person draw from these simple facts?—Surely, that the disease is of such a nature as to be conveyed through human intercourse from one place to another; and, if so, from house to house, and from person to person; for if we allow the one we must allow the other; and what is this but infection? It would be difficult to mention a disease which is more obedient to the laws of infection than cholera. We must either deny that the spread of the disease is ever owing to the power that it has of communicating itself to those who are brought in contact with it, or we must confess that cholera comes within the category of

such. The fact that all who are brought into association with it are not affected by it, argues no more against its infectious nature than it does against that of measles, small-pox, typhus fever, or scarlatina. Medical men and nurses who are daily attending such cases rarely contract any of these disorders; and this is quite proverbial, so that it is supposed they are possessed of some secret charm which is an antidote to the poison that is so prejudicial to others.

But, in saying that cholera is thus propagated, it is not attempted to deny that there are circumstances which greatly influence its progress, and control its spread. There is a specific poison, we believe, which is the exciting cause of the disease; but the phenomena consequent upon its introduction into the system are not manifested unless it therein meets with a certain condition favourable to its development. The seed may enter the ground, but never spring up, from various causes dependent upon the nature of the soil or the climate in which it is sown. We must therefore say a few words on the circumstances which render the poison active, as exhibited in the effects it produces on the economy. The predisposing causes of cholera are similar to those of typhus fever, small-pox, scarlet fever, and the like. However unlike these may be to one another in every other characteristic, yet they are all found to thrive in the same soil, and prey on the same class of victims. Physical debility, be whatever its cause, is that peculiar condition which attracts them, and upon which they love to feed. Their haunts are to be found in the dark, ill-drained, overcrowded lanes and alleys, where misery and vice lurk together, and poverty and dirt go hand in hand. As long as these, their forcing houses, are allowed to remain, so long will they increase and multiply. Whatever depresses the vital powers, renders the system liable to these disorders. The open or badly-constructed drains, and the vitiated atmosphere of ill-ventilated rooms, are secretly but surely undermining the system in this way. The wan look and the emaciated frame attest the fact. The reason why cholera should attack such as these is, the debilitated condition to which they have been reduced: not only have they no vital energy to resist the poison of disease, but they

are in the very state to favour its action. Causes, whatever they be, which produce physical debility, prepare the ground for the reception of the seed, which thus finds a soil suited to its growth. When, therefore, we see cholera selecting such victims as the objects of its choice, it is not that the effluvium from the open cess-pits offers it a menstruum which renders its poison doubly virulent, but it is from the fact that, as it were, by a process of slow poisoning, the energies of the system have been so impaired by this or similar causes as to render it susceptible of any noxious influence with which it might be brought into contact. It is thus that a predisposition is engendered, which is soon manifested when associated with the exciting cause of disease. We see, therefore, why it is that cholera, typhus fever, and small-pox, though dissimilar in all their symptoms, agree in their predilection for the same localities, as affording them a genial soil in which they can increase and multiply.

But it is not to bad drainage or overcrowding alone that we are to look as the predisposing causes of cholera. Any thing whatever which tends to lower the powers of life, and enervate the system, is productive of the same effect. The above, because the most common, are therefore the most apparent causes; but yet even they may exist and the effects not follow. It does occasionally happen that districts badly drained, and noted for their filth, such as we should have selected as likely to be visited by such an epidemic, escape untouched. It is a matter of interest to investigate these exceptions to a general rule; and try to account for them. It may be remembered that in my first paper I mentioned the fact, that during the prevalence of the late epidemic in Plymouth, the low prostitutes who inhabit the dirtiest part of our town, with very few exceptions, escaped altogether. One of the reasons that I assign for their immunity, is the fact that they are able to supply themselves with the necessities and comforts of life denied to most of those who belong to the lower orders of society. They have youth, too; on their side, their ages varying from eighteen to thirty. They live much in the open air, and the fear of the disease kept most of them sober. With them there was no depressing

agency at work, preparing them for the reception and development of that fatal seed which would only spring up on ground adapted to its nature. We occasionally witnessed cases where the drainage was good, the houses airy, and the parties attacked were apparently of a healthy constitution. On inquiry, however, some enervating cause was sure to be discovered, which had created a predisposition in the system to the reception of the disease. With some, fear had been at work, and to such an extent as to impair the functions of digestion, as evinced by total loss of appetite, slight nausea, and threatened diarrhoea. Here was a condition bordering on the first stage of the disease. In others, the same symptoms were manifested, but from a different cause. The digestive powers had been weakened by habits of intemperance. The stomach and liver were organically impaired; and no wonder that a malady, the chief phenomena of which are manifested in the effects it produced in these organs, should fall with double force upon them, previously weakened by other causes. Cases of this sort, unlike those whose predisposing cause was fear, were most fatal; and whenever the disease attacked such as these it did not need the aid of the noisome drain to add to its virulence. It would be interesting to know how far those who go to the other extreme—namely, the tee-totalers, or total abstinentes, escaped during the late visitation, or, if attacked in proportion to the rest of the community, whether the mortality was greater or less amongst them than their fellow men. The only case out of this community that came under my notice, though not under my treatment, as he was attended by a hydropathist of our town, was that of a respectable shoemaker, with whom I had conversed on the Saturday, at 3 p.m. He went to market at 9 p.m., returned to his house a short time afterwards, was seized with diarrhoea, and was dead by ten o'clock the next morning. I believe all extremes, as a general law, are hazardous. I have certainly heard it stated that no tee-totaller was ever known to fall a victim to cholera. My exception may only prove the rule, but certainly it does not make it absolute. It is not necessary to dwell upon diarrhoea as a predisposing cause of cholera, or on

many others which act in this way by depressing the vital powers of the system.

Much responsibility attaches itself to us as members of the profession, in the records which from time to time we may transmit to the world on these important subjects. The public look to us as their authority in all points connected with the details of health and disease; and if the trumpet give an uncertain sound, where will the confusion end?

The importance of efficient drainage cannot be too strongly impressed upon those who, whether in the capacity of sanitary boards or local commissioners, are looked upon as conservators of the public health. But let it not be imagined that the whole root of the evil lies here, and that cholera will disappear with the introduction of large sewers and well-constructed drains. This may help to diminish the power of the giant, but it will not destroy him. Bad ventilation, ill feeding, and overcrowding, are as much its allies as insufficient drainage. As long as these powers, either collectively or separately, are found to exist in a community, so long will cholera defy the energies of the philanthropist to stay its course, and destroy its venom; the only sure antidote against which is a sound and vigorous constitution, free from every taint with which either the wants and deprivations of poverty, or the excesses of dissipation, may contaminate it. Let the causes be what they may which depress the vital powers of the system, and weaken its physical energies, they will be found to predispose it to be affected with cholera. The antidote, therefore, to the poison of that disease is not to be found in the removal of one element, which, it is true, is frequently found in association with it, but not the only one on which it depends for its existence.

I had written most of the above when I met with the following observations, which somewhat startled me, emanating as they do from one whose authority is very great in questions of this nature,—Dr. Southwood Smith. They appeared in one of our local papers, as a part of a letter sent by that gentleman to the Unitarian Minister of our town, in reply to some suggestions made by him as to the propriety of in-

vestigating the history of the drainage of Plymouth, in connection with the details of the late epidemic. "It is of great importance (says Dr. S. Smith) that the public attention should not be directed from the *true source* of the evils in question, which the whole tenor of the evidence shows to be in the *condition of the localities, and not in the communication from person to person*. Any reputed facts appearing to favour the latter mode of the spread of disease should undergo a searching inquiry. *All break down* when closely examined, as far as I yet know." This conclusion we hope to see argued out. As it at present stands, it denies those premises from which the inference of infection has been hitherto drawn in the history of disease.

I have already, I fear, exceeded the limits which your crowded columns will allot me. For the present, therefore, the subject of treatment must be postponed. This I hope to touch upon in another paper, together with some other details in the history of this mysterious disease, which have been overlooked in my previous papers.

8, Mulgrave Place,
April 9, 1850.

TREATMENT OF SYPHILIS, BELLEVUE HOSPITAL, NEW YORK. BY DR. REESE.

A LARGE majority of the surgical diseases found in the Charity Hospital, New York, are constitutional syphilis, in the secondary or tertiary forms. Among these, cases of iritis are frequent, and are generally cured by mercurials and opium internally. Periostitis, in every form and location of nodes, is very generally removed by the iodides and arsenic; the latter often successful after the former fails. Rupia yields to large doses of the iodide potassium, with caustic sublimate, or in some cases without it. The iodide of quinine has been found useful both in secondary and tertiary syphilis; nor, indeed, has any form of this terrible malady been found irremediable, except when the larynx and trachea have extensively suffered. In one case tracheotomy was resorted to, without, however, any other than temporary relief. It is scarcely necessary to add that, apart from the medication above named, very great reliance is placed, in constitutional syphilis, upon liberal and even generous diet.—*Dr. Reese, in American Journal of Medical Sciences, Jan. 1850.*

ON
THE TREATMENT OF CROUP.

By W. B. KESTEVEN, M.R.C.S.

THE following observations, which the writer trusts are not entirely devoid of practical interest, are intended as a sequel to a paper on the Diagnosis of Croup, published in the MEDICAL GAZETTE, March 29th :—

Of the several indications which present themselves, the first and most urgent in the treatment of *true croup*, is the removal of the spasm which threatens to suspend respiration.

The second indication is the arresting inflammation.

The third, the promoting the removal of morbid products, the mucous and fibrinous secretions, which by obstructing the glottis become a secondary source of risk to life.

The last indication to be kept in view is the supporting the powers of the constitution.

Obviously, the success attending the ministering to these several indications must necessarily, one and all, depend upon the period at which recourse is had to medical assistance. It too often happens that, either from negligence, or from ignorance of the nature of the attack, the disease has been allowed to gain ground before medical advice is sought.

But supposing that a fully developed attack of true croup has only manifested itself a short time—*e. g.*, from two to six hours—What, then, are the measures to be taken for the fulfilment of these indications?

Free and full vomiting is to be produced without loss of time. By its means we shall in all probability at once fulfil the two first indications—*viz.*, the removal of the spasm of the muscles of the larynx, and the arrest of the inflammation of its mucous membrane.

Tartar emetic, in the dose of an eighth, or a quarter, or even half a grain, given every ten minutes, is the agent generally employed for the obtaining this end. But it has occurred to the writer more than once to see fearful depression of the heart's action induced in young children by this heroic treatment; and he has consequently been induced to trust to ipecacuanha, except in elder or

very robust children, or where the disease is unusually severe, in which cases antimony alone is to be relied upon. As a general rule, subject to the above exceptions, it is not only not safe, but dangerous, to administer full doses of tartar emetic to children under two years of age.

The opinion of Dr. Beck,* of New York, is to the same effect; as is also that of M. Guersant, who further recently stated, at a meeting of the Surgical Society of Paris (Jan. 16th), that he attributed the failure of the operation of tracheotomy in croup to the debilitating effects of previous treatment.

For the same reasons, Dr. Cheyne† recommended the use of ipecacuanha in the first instance, and had recourse to tartar emetic only in the most severe cases; and that with a cautious regard to its depressing effects.

There is also another advantage to be found in the employment of ipecacuanha in croup—*viz.*, its aperient qualities. These are more certainly obtained if the powder be exhibited. It is seldom that its emetic action is not also followed in the course of an hour or two by its purgative effects. This is a property not to be overlooked, where otherwise, from the nausea consequent on the action of tartar emetic, it is often impossible to get a purgative retained on the stomach, for some time, at least. If vomiting be procured early and freely, it will, as we have observed, usually render depletion unnecessary. Dr. Churchill‡ states that when he has, in the cases of his own children, obtained this effect, the disease has been cut short. The writer would also add, that his own domestic experience, with that derived from private as well as extensive dispensary practice, leads to the same conclusion.

Provided, however, that these means do not sufficiently control the disease, then depletion must be had recourse to. If there be any spasmodic action unsubdued, or if the croupy noise be undiminished, then blood must be taken. General bleeding is strenuously advocated by some authors at the onset. Dr. Churchill recommends leeching. The writer's experience goes with the last. Of the whole number of cases of

* Essay on Infant Therapeutics. New York. 1849.

† Cyclopædia of Practical Medicine.

‡ Diseases of Children, p. 251.

croup which have come under his care, he has seldom seen one that did not yield to the measures now spoken of, or which, not yielding to these, was not either in its own nature, or from the patient's constitution, of a character to exclude even the thought of general depletion; at the same time he has seen fatal cases of croup, in which, after death, sloughing of the mucous membrane of the glottis has been found; he will not say in consequence of over active treatment, but he simply observes that these circumstances were met with after very active treatment.

Conjointly with the above measures, blisters, sinapisms, or hot sponges, as advised by Dr. Lehman, may be advantageously employed. Dr. Lehman's plan consists in the application of a sponge squeezed out of hot water, to the throat and laryngeal surface of the neck, until redness of the integuments is produced.

But a powerful adjuvant must not be omitted,—the warm bath, after or even at the same time with the exhibition of the emetic. The hot bath exerts a beneficial influence in allaying both the spasmodic and the inflammatory action. The best mode of employing this means with children is to place the child in warm water, and gradually to raise the temperature, till judging by the hand that the temperature is sufficiently raised, or until the thermometer rises to 110° or 120° Fah. By this method all the advantages of the hot bath are gained without the disadvantages which arise from the child's cries and struggles on being suddenly placed in water at so high a temperature as 100° to 120°, which is the highest temperature that need be used.

If these measures do not completely cut short the attack, they will moderate its severity, and prepare the patient for the action of further remedies. Of these, the most valuable is calomel. This medicine should, however, be combined either with sufficient ipecacuanha or tartar emetic, according to the age and strength of the patient, to keep up a nauseating effect. The earlier employment of calomel is not merely useless, but in many respects prejudicial, by inducing catharsis and its consequent depression. In children under two years of age, or in those of feeble constitution, it may not be advisable to adopt even such active treatment. The hydrag.

c. creta, with small doses of ipecacuanha and nitre, or with Dover's powder, may be preferable. It is quite possible that the effects in the shape of the deposition of lymph, or of tenacious mucus in the larynx, or the œdema of the glottis, may be altogether galloped over by the too free use of antimony and calomel, while these are at the same time producing their effect upon the action of the heart and depressing the vital powers; the local disease in the meanwhile going on to sloughing of the mucous membrane of the glottis, ulceration of the mucous membrane of the mouth, diarrhoea, &c., perhaps sinking the patient, or rendering subsequent measures nugatory.

The mercurial or other treatment employed in this second stage is much aided by blisters or some other form of counter-irritation.

The fulfilment of the third indication, the removal of the products of inflammation, in the form of false membrane or of tenacious mucus, is usually effected by the preceding measures. The effort of vomiting frequently causes the ejection of the false membranes, and promotes their expectoration by coughing. The roughness of the cough, and the peculiar noises of croup, become diminished thereby. It may be noticed in passing, that there is a prevalent opinion that croup is not present except false membrane be formed; but the disease may be arrested before it has reached that point, or there may be only a dense tenacious mucus equally obstructive to respiration. It is a dangerous error to disregard the spasmodic element of croup. This has been already dwelt upon at page 542 of the present volume. Croup may prove fatal by spasm of the laryngeal muscles before time has been given for the deposition of false membrane; and it does not follow even that the false membrane is not present because not seen: it may pass into the stomach by deglutition, and so escape notice. Its correct diagnosis, and its early and active treatment, is therefore of the very greatest importance. On the other hand, the spasm being subdued, suffocation may ultimately supervene from œdema of the glottis, or from the accumulation of tenacious mucous secretion on the surface of its mucous membrane.

Supposing the failure of the measures which have been considered, it is in the

fulfilment of this third indication that the method proposed and adopted by Dr. Green, of Philadelphia, has been found most successful. Dr. Green applies to the glottis a strong solution of pure nitrate of silver on a piece of sponge fastened to a whalebone rod. Dr. Green is very careful that the salt shall reach *below the epiglottis*, and come in contact with the rima glottidis. The immediate effect is a paroxysm of coughing, whereby the pseudo membrane is ejected, and at the same time the nitrate of silver exerts its known beneficial sedative influence on the inflamed mucous membrane. It is only fair to state that the writer has not yet had occasion to employ this remedy, but from the success attending its use in those cases which have been reported, from Dr. Green's statements in its favour, and from the writer's own experience of its value in epiglottitis and other pharyngeal affections,* he should have recourse with much confidence to the topical application of nitrate of silver in croup. Since he has become acquainted with Dr. Green's plan of treatment, he has not met with a case that has resisted the previous treatment. But should such occur to him, he should lose no time before putting it in practice, and should certainly look for happier results than from the desperate alternative of tracheotomy.

In discussing the third indication of treatment, it is necessary to consider the question of tracheotomy. In a former communication, already alluded to, it was shown that the essential danger of croup consists not more in the occlusion of the rima glottidis by lymph or mucus, than in the violent spasmodic action of the muscles of the larynx.

If the spasm be arrested at the outset, the inflammation, persisting, extends to the trachea, bronchi, and air-cells; it is no longer singly croup that is to be encountered; and, although it is impossible to state the precise degree of this extension of morbid action, its probable existence, and the consequent little influence to be exerted on it by tracheotomy, are strong reasons against incurring the undoubted danger from syncope, convulsions, hæmorrhage, asphyxia, &c., attendant on this operation.

Although, in England at least, the small results which have followed the performance of this operation in croup hold out little encouragement to its repetition, it cannot be denied that there may be cases in which, where the spasmodic action having been subdued, the inflammation continues fixed in the larynx, despite all treatment, and in which it would be right to give the patient at least a chance of his life by its performance.

But it must be borne in mind, that, for the reasons above given, tracheotomy is not had recourse to generally until the constitution is greatly debilitated by the active antiphlogistic measures which have been employed. This is a very important circumstance to be borne in mind in calculating statistically the results of the operation, and, as before stated, is by some regarded as sufficient to account for its failure. Another circumstance, however, must not be omitted in considering this part of the question. Sufficient care has not always been taken to ensure an equable and warm atmosphere in the chamber in which tracheotomy has been performed. This, indeed, from the condition in life of many patients, it is impossible to ensure; and, from the urgency of the case in most instances, it is not possible to wait the attaining.

Another point of great importance has been much neglected in reference to the treatment of croup; and that is, the use of moist air.

In September 1845, Dr. Golding Bird read a paper at the Medical Society on the treatment of disease by moist air.* The writer's attention was thereby directed to this therapeutic adjunct, and has found it one of very great value, not only in croup, but in other inflammatory diseases of the respiratory organs of both children and adults.

The bed-room must be rendered secure from draughts by stopping the casements of the window and closet-doors, &c., and by hanging a sheet or blanket on the outside of the door, so as to prevent the admission of currents of cold air during the ingress and egress of the attendants. A large fire is to be kept constantly burning, and a large kettle with a long spout, or with the addition of a piece of gas-pipe, is to be kept con-

* See MEDICAL GAZETTE, N. S., vol. v. p. 761.

* For an abstract of Dr. Bird's paper see MEDICAL GAZETTE, N. S. vol. i. p. 999.

tinually boiling, so that a current of steam is constantly issuing from its spout into the bed-room. A spout several feet in length, and of an inch bore, may easily be fitted to a common tin kettle for this purpose.

The temperature of the room should be from 70° to 78°; but in winter it is found scarcely possible to heat an ordinary bed-room above 70. It is as well to suspend a thermometer near the centre of the bed, in order by its indications to maintain a regular temperature, which is by no means difficult with ordinary care. Indeed, as Dr. Bird observes, "it is remarkable how little the thermometer varies" under the circumstances.

The importance of promoting the depurating action of the skin, both in health and disease, and most especially in acute inflammatory complaints, is well known; and here is a means by which that end is obtainable. The writer well remembers the very speedy and marked benefit which he obtained by this means in a case of pleuritis under his care. The skin had remained dry and harsh, the disease was little controlled, and effusion had taken place into one pleural sac. The employment of moist air effected a rapid improvement in the symptoms, and from the hour of its employment was dated the recovery of the patient.

Its influence will be seen in the decrease of the dyspnoea, and a diminution in the violence and frequency of the cough. The genial temperature has a soothing effect on the surface of the body, and the warm moist air is less stimulating to the larynx, and other air passages. Free perspiration is speedily induced, and continues. The writer's experience fully accords with the statements of Dr. Bird which he has quoted,—so much so, that he would desire that he may never have to treat a case of croup without at the same time possessing the means of obtaining a full supply of warm moist air wherewith to charge the atmosphere of the patient's chamber.

The best indication,—that of supporting the powers of the patient, so as to enable the constitution to bear the effects of the disease, and of the treatment,—is to be kept in view and acted upon concurrently with the other indications. Where the means employed to arrest the inflammation fail, this last

indication becomes one of considerable difficulty. The disease and the remedies between them have depressed the powers of the constitution, and the latter has not the capability of throwing off the disease. The plan of treatment is obvious enough,—the result too doubtful, and dependent to a great degree on the skill of the attendants. Stimulants, as ammonia, wine, &c., must be given, according to the state of the heart's action, and any benefit which is to be derived from them is only to be obtained by their cautious administration, pulse in hand, for many hours together. It is, however, to be feared, when things have come to this pass, that the effects of inflammation have pervaded the respiratory organs to too great an extent to permit the due aeration of the blood for the sustentation of the vital process.

It will be observed that the author has here spoken only of one form of croup, and has not alluded to the treatment of "inflammatory" as distinct from "spasmodic" croup,—of "primary" from "secondary" croup,—or of many other varieties which are met with in books. He has done so, because, as remarked in his previous communication, he considers that these have arisen out of the want of precision in diagnosis. He has regarded them as several phases of true croup, or as forms of disease differing in their seat and in their nature. For these reasons he passes over their separate treatment, and consigns them to their appropriate treatment as tracheitis, laryngitis, laryngismus, &c., looking upon croup itself as a distinct disease, comprising an inflammatory and a spasmodic element, presenting many shades of severity, and requiring a careful adaptation of treatment, though on uniform principles, to each individual case.

Holloway, April 1860.

ACETATE OF AMMONIA AS A REMEDY FOR DRUNKENNESS.

THE employment of acetate of ammonia as a remedy for drunkenness, which has lately been circulated through the foreign medical journals, as a recent suggestion by M. Chevallier, has in it no novelty whatever. We understand that it was used many years ago in the treatment of drunkards, by Dr. Ogston, of Aberdeen.

BRITISH NOTES ON THE DISEASE,
INDIAN VILLAGE CHOLERA,
AND ITS TREATMENT.

By ASSISTANT-SURGEON MOORE, B.A.
Gwalior Contingent.

[Continued from p. 986.]

PART IV.

Cupping externally, and lunar caustic internally—Life prolonged in the third stage of cholera.

CASE XVI.—Fifteen hours after death the stomach and intestinal canal of Dhoonkhu Kautchee were slit open. He was a prisoner in the jail at Lullut-poor, and was seized with cholera on the 16th of October, 1849.

The mucous membrane of the stomach was pale, and healthy in appearance. It was devoid of vascularity. There was not the trace of a blood-vessel visible. The surface was free from the coating of thick, tenacious, glairy mucus. On the posterior wall, about midway between the termination of the œsophagus and the pylorus, a dark circular caustic stain existed. In circumference it equalled that of a silver fourpenny piece. The discolouration had penetrated through the superficial layer of mucous membrane, to the submucous tissue, but no deeper. Close to the pylorus, and situated on the posterior wall of the stomach, two other caustic stains were brought to view. Of these, one was superficial, and engaged little more than the epithelium: the second stain was deeper, more circumscribed, and penetrated as far as the submucous tissue, through the superficial mucous coat.

On the posterior wall of the duodenum, the colour of the mucous membrane was dark brown. In the duodenal pouch, or first division of the gut, where deep-seated redness generally exists, all traces of vascularity had disappeared. Throughout the three divisions of the duodenum there were ocular proofs of the passage of the caustic. The stains were superficial, and did not extend even to the submucous tissues. Long white streaks, and circular spots of a dusky whiteness, dotted the surface of the mucous membrane, and denoted the contact of the caustic with the epithelium of the mucous membrane.

In the jejunum and ileum intestines, the course of the lunar caustic pill was traced with accuracy, and with certainty as far as the lower part of the ileum. Within five inches of the cæcum caput coli, the last of the caustic appeared to have come in contact with the mucous membrane. Beyond this point there was no ocular proof of direct contact. The spots and circular dots, and long narrow streaks of dusky whiteness, were slightly raised above the surrounding smooth and glistening mucous surface, and contrasted strongly with the vascularity and crimson red tint of the submucous tissues, beyond the influence of the caustic.

In addition to the dusky-whiteness, the mucous membrane corresponding to the track of each caustic streak appeared puckered; the mucous surface was freed from the gelatinous, glairy mucus, adherent to the epithelium, untouched by the caustic, and all vascularity in the immediate vicinity of the caustic streak had dispersed.

Although the stomach and duodenum were empty, yet the jejunum and ileum intestines were distended with fluid secretions of serum, mucus, lymph, and other ingredients, which from their intimate blending together, resembled thin water gruel. In the lower division of the ileum, as far as its termination in the cæcum, the secretion which adhered tenaciously to the surface of the mucous membrane resembled the thick sputa expectorated in bronchitis. This exudation had collected in large pellets in different parts of the intestine. The fluid contained in the colon and rectum corresponded in appearance and in the flaky deposits, or sediment, with that evacuated during life from the bowels.

The mucous membrane in the jejunum for the most part retained the faded rose-coloured tint. Whilst the mucous membrane of the ileum was more vascular, the depth of crimson redness extended to the submucous tissues; the capillaries were more prominent from excessive engorgement; and the glandular bodies were more tumid and more deeply injected. In the large intestine a few patches of vascularity were apparent. The mucous membrane in other respects was healthy.

The liver was healthy, excepting at the sharp edge of the inferior lobe. The structures here were gorged with fluid tarlike blood. The gall bladder was

distended with thick, black, treacle-like bile. The kidneys were healthy. The bladder was contracted and empty. It did not contain a single drop of urine. There was chronic enlargement of the spleen.

The left ventricle of the heart contained a quantity of fluid tarlike blood. That in the right ventricle was trifling. The muscular structures of the ventricles were healthy. The lower lobes of the lungs were engorged. The mucous membrane of the bronchial tubes was intensely vascular.

Symptoms on admission.—Cold extremities; cramps in the muscles of the legs, thighs, and abdomen; vomiting and purging of rice-water fluid frequent. His eyes were sunk in the sockets, but were clear and bright. His intellect was clear. The pulse could not be felt at the wrist. The heart's impulse was imperceptible. The action was feeble. The sounds were indistinct, and resembled the distant ticking of a watch. The action of the large arteries, indicated by the clear, sharp clack, or second sound, was more distinctly heard towards the fourchette of the sternum, than below the nipple of the left breast. Thirst was insatiable. The greater the quantity of water he drank, the more he wanted. Restlessness, and constant jactitation of the limbs, were marked features in his case. The abdomen was sunken and doughy, inelastic under pressure. Secretion of urine was suppressed. The bladder had been emptied with, or soon after, the first gush of rice-water fluid from the bowels, but since then no urine had been passed by him.

The sinking of the energies of life in this prisoner was rapid and sudden. An hour previous to admission he required no assistance to walk to a distance and discharge the liquid contents of the bowels. His symptoms on admission into hospital left no hope for recovery. His death was hourly looked for.

His feet and thighs were fomented. The cramps were relieved. Friction and stuping of the abdomen were employed previous to cupping. A few clots of dark blood oozed out under the glasses; afterwards, a blister was applied, but did not vesicate. Whilst the fomentation of the extremities was carried into effect, a pill containing five grains of lunar caustic was placed on his tongue, and was washed down with

cold water. Shortly afterwards he rose from the charpoy (bedstead), and filled an earthen pot with sero-mucous fluid, containing a thick flaky sediment. The quantity passed must have exceeded two quarts.

This was the last discharge from the bowels. With this exception, from the time he swallowed the five grains of caustic, until he died, he was neither vomited nor purged. At 12 o'clock P.M., five hours after admission, symptoms of reaction set in. A degree of comparative improvement was obvious. The temperature of the body had improved. The icy-coldness of the extremities had passed away. The spasmodic contractions of the muscles were not so frequent nor so violent. The urgency of thirst was somewhat abated, and the vibrations of the artery at the wrist were communicated to the finger.

The hope now entertained, that the worst had passed, proved to be fallacious. Between 3 and 4 o'clock P.M. he relapsed into a state of icy-coldness; a clammy sweat broke out over his face, neck, and chest; his breathing became difficult. He died in the evening, about 10 hours after admission into hospital.

The arrest of the secretions from the inflamed mucous surface of the stomach and intestinal canal, by the direct action of the lunar caustic, prolonged life in this instance. The examination of the viscera afforded ocular proofs that, in its action, lunar caustic is invariable and unvarying, whether it be administered in the first or in the last stage of cholera.

CASE XVII.—Cupping externally; lunar caustic internally—Life prolonged in the third stage of cholera.

Fourteen hours after death the stomach and intestinal canal of Maruw Joo were examined. He was a prisoner in the jail at Lullutpoor, and had fallen a victim to cholera on the 14th October, 1849.

The internal surface of the stomach was coated over with a layer of glairy, gelatinous mucus, mixed with flakes of plastic lymph. In several places this extraneous exudation appeared to have been completely detached from the mucous surface, whilst here and there a few separate patches adhered to the epithelium of the mucous membrane by shreds of mucus. Over the greater part of the internal surfaces the glairy jelly-

like secretion of mucus adhered tenaciously to the mucous membrane. When removed by scraping, or detached by a forcible jet of water, the epithelium underneath appeared flossy and deeply injected, participating in the scarlet and deep crimson redness of the mucous membrane. The mucous membrane, also, was glossy, and polished, and tumid. The intumescence arose from the infiltration of serous fluid into the submucous cellular tissue.

Within two and a half or three inches of the adherent coating of mucus, where the exudation was more dense than elsewhere, several broad, dark, but superficial caustic stains existed. In the immediate vicinity of these stains, the epithelium and mucous membrane were freed from the coating of gelatinous mucus, and from vascularity. At the pyloric orifice, one caustic stain, and a streak of dusky whiteness, were noticed. Within a short distance of each the mucous membrane appeared slightly puckered, but was free from mucus and from the deep vermilion injection, rendered apparent by the detachment of the exuded mucus on the posterior wall.

In the first division of the duodenum, or sacculated pouch of the gut, there remained indistinct traces of inflammatory action. Here, as well as in the stomach, superficial stains, dots, and narrow streaks of dusky whiteness, tracked the course of the lunar caustic pill. In the second and third divisions the mucous membrane presented a faded rose-coloured tint, but no trace of the pill. The gut was distended with a thick, creamy, greyish-coloured fluid; and between the folds of the mucous membrane, flakes of lymph, and pellets of inspissated mucus, adhered to the surface.

Jejunum and ileum.—In the former the fluid contents were thick and gruel-like. As in the second and third divisions of the duodenum, this cholera puddle was formed by the intimate blending together of serum, mucus, lymph, and the saline ingredients of the blood. The intestine was loaded with these exudations or abnormal secretions. From each section of the gut, ounce after ounce trickled away. Unless witnessed, it could scarcely be credited that so large a quantity of seromucous fluid mixed with lymph, remained in the intestinal canal after the copious discharges from the bowels dur-

ing life. In the ileum, however, the cholera-puddle did not exist in any quantity. The secretion with which the mucous surface was besmeared was viscid, tenacious, concrete.

The faded rose-coloured tint, noticed in the duodenum, pervaded the entire length of the jejunum. The mucous membrane was tumid, and glossy from the infiltration of serous fluid into the submucous cellular tissue. The epithelium was flossy, and participated in the rosaceous tint of the mucous membrane. The capillaries were injected with crimson-red blood. The engorgement of the mucous membrane was more marked in the ileum than in any other portion of the intestinal tube. Within a few inches of the cæcum caput coli, the discolouration was dark red, approaching to purple. On the mucous surface of these intestines there were no ocular proofs of the caustic having come into contact with the mucous membrane.

In the colon and rectum, the fluid contents emptied from the gut were precisely the same as the rice-water discharges evacuated during life. The mucous membrane in each intestine was pale, and besmeared with a thin coating of mucus, resembling a thin solution of gum.

About four inches from the cæcum caput coli, a black circular patch attracted notice. The undissolved portion of the caustic pill had become impacted in a fold of the mucous membrane of the colon, and during the process of solution had formed a large circle. The caustic penetrated to the submucous tissues at the immediate point of impaction. Beyond this, however, its action was limited to the surface. The passage of the pill through the jejunum and ileum intestines must have been quick.

The glandular bodies in the stomach and small intestines presented an irritated appearance. In many places they were prominent, distended with a semi-transparent fluid, and formed points, towards which the capillaries injected with crimson-red blood, emerged. The excretory ducts of the most prominent glandular bodies, also, appears under the lens to participate in the irritated and inflamed condition of the gland. The mouths were unusually wide and pouting.

The structures of the liver were

healthy, except at the thin edge of the left lobe. In this part of the mucus some stagnation of dark fluid blood had taken place. The gall-bladder contained a quantity of dark treacle-like bile, which, when rubbed on paper, or between the fingers, left a dark bottle-green stain. The spleen, pancreas, and kidneys, were healthy. The bladder was contracted and empty. There was not a drop of urine inside.

The left lung was solid—in part hepatised, and in part engorged with fluid blood. The mucous membrane of the bronchial tubes was injected with dark venous blood. The right lung was partly engorged on its lower and posterior aspect. The left cavities of the heart were loaded with a black jelly-like blood. The right cavities were empty. The structures of the auricles and ventricles were sound.

Symptoms on admission.—Vomiting and purging of rice-water fluid had been frequent, and were quickly followed by cramps in the toes and calves of the legs. His extremities were cold, and the pulpy points of his fingers and toes were shrivelled. His breathing was laboured. Thirst was insatiable. His constant call was for cold water. The tongue was cold at the tip and at the sides, but was moist and warm towards the back part. The pulse was indistinctly felt at the wrist: its vibrations were so rapid that they could not be counted. A weak and thready sensation was communicated to the finger. The action and sounds of the heart were indistinct from the rapidity with which one sound succeeded the other. In the left lung there existed the physical signs of solidity and engorgement of the tissues.

He was cupped, but no blood flowed from the surface of the abdomen. The cupping was followed by the application of a blister, but no vesication ensued. A pill, containing five grains of lunar caustic, was placed on his tongue and washed down with cold water. Cold water was supplied in abundance. He was allowed to drink as much as he desired. From the time that he swallowed the caustic pill until he died exhausted, he had not a single vomit, nor a single purge. Whatever was swallowed in the shape of drink or of medicine was retained in the stomach.

In the course of two hours after the pill had been administered an improvement

in the state of the patient took place. The symptoms of reaction set in. A greater degree of warmth was developed over the surface. A larger volume of blood circulated through the arteries. The pulsations at the wrist became more perceptible. The violent spasmodic contractions of the muscles were subdued. There was more life and energy in the patient. His calls for water! water! water! were not so frequently repeated.

The improvement was only temporary; it was not progressive. The symptoms of extreme collapse succeeded. A cold clammy sweat broke out over his neck and body. The pulse ceased to beat at the wrist. The action of the heart became convulsed. The sounds were scarcely audible. Death terminated his sufferings.

The features worthy of notice in the preceding cases are—1st. The cessation of the vomiting, and the allaying of the irritability of the stomach. 2d. The arrest of the rice-water purging from the bowels. 3d. The relief afforded to the patients from the violence of the spasmodic contractions of the muscles. 4th. The temporary reaction in consequence of the arrest of the internal seromucous flooding, and the prolonging of life for hours beyond the time indicated by the symptoms.

The facts ascertained in the examination of the stomach and intestinal canal are important. The proofs visible to the eye, and traceable by the touch, set at rest the question as to the positive control exercised by lunar caustic over the irritated and inflamed gastro-intestinal mucous surface. This is the essential point established. Through it can be explained the irresistible agency of lunar caustic in arresting an attack of cholera at the onset, or in its first stage, and of checking the progress of the disease from the second or intermediate stage, to the third or the stage of collapse.

Lunar caustic, administered in quantities so small as one grain, repeated at intervals, does not yield any marked results in the third stage of cholera. When diluted in the thick greyish-coloured gruel like cholera-puddle, consisting of the secretions of serum, mucus, lymph, and other ingredients blended together, its action on the mucous surface is interrupted.

CASE XVIII.—Soon after admission

into hospital, Heera, a prisoner in the jail at Lullutpoor, was violently purged. Three copious discharges of rice-water fluid gushed from his bowels. Had this sero-mucous secretion been measured, the quantity would have exceeded three quarts. At the same time, about a pint of clear serous fluid was ejected from the stomach. His pulse was depressed, and vibrated feebly under the finger. His lips, the mucous membrane of the mouth, and of the gums, had changed colour to a deep indigo blue. The skin of the fingers and toes, and of their pulpy extremities in particular, was shrivelled. His extremities were cold. Spasmodic contractions rounded the calves of the legs into hard balls. The spasms extended to the muscles of the abdomen, and to those of other parts of the body. The abdomen was sunken and doughy; inelastic, but free from pain. The pulse counted in the large arteries ranged between 135 and 140. The secretion of urine was suppressed. He suffered from an insatiable thirst. The more water he drank, the more he desired to have.

According to the instructions given, he was cupped over the abdomen after the fomentation of the extremities. A few clots of dark venous blood oozed out under the glasses. The blood abstracted might have filled a table-spoon. Instead of the pill containing five grains of caustic, one composed of one grain of lunar caustic, five grains of antimonal powder, and one grain of opium, was placed on his tongue and washed down. The results were so far satisfactory that the vomiting and purging were checked. The violence of the cramps was subdued, and the temperature of the body was improved. After these symptoms of reaction, stimulants and anodynes were administered. They were retained on the stomach, but exercised no influence over the progress of the symptoms to a fatal termination. He died on the 13th October, 1849.

Eight hours after death. — The gastro-intestinal canal was slit open. The stomach was distended with the water drunk during life. Its internal surface was coated over with a dense layer of semi-transparent gelatinous mucus, mixed with flakes of plastic lymph. This morbid exudation adhered tenaciously to the anterior and posterior walls of the stomach, but terminated by an abrupt line within two

and a half or three inches of the pyloric orifice. When scraped off, or washed away by a strong jet of water, the mucous membrane and subjacent tissues presented shades of redness, from deep scarlet, to the faded rose-coloured or pinkish tint. The folds of mucous membrane on the posterior wall were deeply dyed.

Close to the pyloric orifice these shades of redness did not exist. Two circular dark patches, a few inches apart from each other, were noted. The stains had penetrated below the superficial lining membrane to the submucous cellular tissue. In proximity to, and for nearly three inches beyond these caustic marks, the mucous membrane was pale, and freed from the thick coating of glairy gelatinous mucus. The tumid, glossy, and vascular state of the tissues towards the œsophageal end of the stomach contrasted strongly with the change which had taken place close to the pylorus, and in the vicinity of the caustic discolouration.

A small quantity of thick mucus was contained in the duodenum. The mucous membrane of this intestine exhibited a faded rose-coloured tint, except in the vicinity of a long black dotted line, and a streak of dusky whiteness, slightly puckered and raised, by which the contact of the caustic with the mucous surface was denoted.

The jejunum and ileum intestines contained a small quantity of thick, dark green fluid. The surface was smeared with a secretion, in which lymph, mucus, and serum, were blended together. Flakes of inspissated mucus, and of plastic lymph, were lodged between the folds of the mucous membrane. The epithelium in the jejunum was flossy, and participated in the vascularity of the mucous membrane. The glandular bodies in each intestine appeared swollen, vascular, and distended with a semi-transparent fluid. Their excretory ducts gaped wide. For several inches above the cæcum caput coli the mucous membrane of the ileum was deeply injected; and for a short distance below this point the mucous membrane of the colon participated in the same dark red vascularity bordering on a purple discolouration of the tissues.

The large intestines were loaded with sero-mucous fluid, in which shreds of lymph and mucus floated. The secretion corresponded in every respect with

the rice-water discharges evacuated from the bowels during life. Patches of vascularity dotted the membrane here and there. There was no trace of the caustic beyond the black line, and the streak of dusky whiteness, noticed on the mucous surface in the first and second divisions of the duodenum.

The liver, kidneys, and pancreas, appeared to be free from disease. The gall bladder was distended with dark viscid bile. The spleen was affected with chronic enlargement. The bladder was empty. The lungs retained their crepitating feel. A crimson redness was diffused over the surface. The mucous membrane of the bronchial tubes was dyed of a dark red colour. The right and left cavities of the heart contained a small quantity of fluid, tarlike blood. The muscular fibres were sound.

[To be continued.]

DIFFERENCES IN THE SUPERIOR MAXILLARY BONES OF THE CAUCASIAN AND AFRICAN CRANIA.

THE superior maxillary bone presents, in the African head, a distinguishing mark, whereby it can readily be recognised, and which also carries out the same views of the classification of the human species, when examined in its fetal condition, and compared with its analogue in the inferior animals.

The portion referred to is the inferior edge of the anterior nares. In the Caucasian head there is a sharp edge or crest, continuous with the anterior edge of the nasal process, and reaching to the anterior nasal spine. In the African head this crest is wanting, the surface is flat, and the orifice of the nose resembles that of the monkey and other inferior mammalia. This difference is so striking and uniform that any one can recognise the distinction at once. The fact is so well known to anatomists in this city that I have not thought it necessary to add any tables of comparison at this time upon the point, although the merit of the discovery is somewhat doubtful. Now, when the fetal superior maxillary bone is examined, it will be found that this ridge or crest is also there deficient, and the surface is flat. Here we again see that the adult African head permanently retains a form characteristic of the fetal head, and that this form belongs to many inferior animals. — Dr. Neill; in *American Journal of Medical Sciences*, Jan. 1850.

MEDICAL GAZETTE.

FRIDAY, JUNE 21, 1850.

It appears that we were under a little misapprehension in our remarks last week, in restricting the balloting, suggested by our contemporary the *Lancet*, to "legally qualified" practitioners in England and Wales, as well as in our interpretation of the balloting questions. We gave, however, the *ipsissima verba* of our contemporary, so that each might put on them his own interpretation.

In the *Lancet* of the 8th instant the votes were restricted to "all legally qualified members of the medical and surgical profession residing in England and Wales;" while in the same journal of the 15th we are told that votes will be received from all members of the profession "who are practising in England and Wales, and who are connected by diploma or license with any of the Universities or Colleges of Physicians or Surgeons in the United Kingdom, or with the Society of Apothecaries," &c. It is clear, therefore, that the votes of men *not* legally qualified to practise in England and Wales will be received.

We have lately shown* that out of 10,947 members of the profession residing in England and Wales, there are only 7604 possessed of *English* qualifications, and therefore legally qualified to practise in this part of the kingdom. Hence, if the scheme of our contemporary were fully carried out, there would be recorded 3343 votes of persons *not* legally qualified to practise, although *residing* in England and Wales. If a "legal" association with an English College or Hall be not considered necessary to those who record their votes,

* MEDICAL GAZETTE, May 17, p. 867.

why are the balloting papers to be restricted to gentlemen *practising* in England and Wales? If a Scotch graduate south of the Tweed can fairly record his vote on the mooted question of a new incorporation, why is this privilege to be denied to a graduate north of the Tweed? There are 1846 gentlemen now practising in England and Wales and Scotch, Irish, and foreign diplomas; and if they be permitted to vote, others who have the same qualification, but who happen to be residing in Scotland and Ireland, should be equally empowered to record their opinions.

Merely residence in England and Wales has surely nothing to do with a question which affects the medical polity of the United Kingdom. There are Licentiates of the Society of Apothecaries, and Members of the College of Surgeons, who are practising in Ireland and Scotland. Under the proposed scheme, these persons are excluded from recording their votes, merely because

they are not residing in this part of the kingdom; but they have manifestly a better right to express an opinion on the debated questions, as being "legally qualified" members of English Colleges, than those who practise in England, but are not members of these Colleges. The scheme, therefore, so far as the *voters* are concerned, must be a complete failure. Whatever may be the result, if restricted in the way suggested it can neither record the sense of the medical profession in the United Kingdom, nor of the legally qualified members of the English corporations.

But if we leave the *voters*, and go to the *questions* on which they are expected to vote, the *imbroglio* becomes still greater. The first question has been so entirely altered in its more recently published form, that any practitioner in the United Kingdom might fairly give his assent to it, although he would have probably put his veto on it in the form in which it was first proposed.

BALLOTING QUESTIONS.

Lancet, 8th June.

Question 1.—Whether the Charter of the Royal College of Surgeons of England should be so amended as to admit practitioners in medicine, surgery, and midwifery, to seats in the Council of the College, on the principle of representation?

Question 2.—Whether the practitioners in medicine, surgery, and midwifery, should be incorporated in an independent College, on the principle of representation?

In the second series of questions every thing depends on the meaning attached to the terms "represent the interests." Many will no doubt consider that the interests of general practitioners will be sufficiently represented by the College of Surgeons, when it has been reformed by a new charter on the basis of their recently-published Resolutions.* On the other hand, members of the National Institute are opposed to

Lancet, 15th June.

Question 1.—Shall there be a reformed College of Surgeons, so as to represent the interests of the general practitioners?

Question 2.—Shall there be a new incorporation for that body?

this view *toto calo*. No reformation of the College will suit them except the conversion of it into a College at whose Council-board, men who dispense medicines may have seats by a species of popular election.

It is unfortunate that the balloting questions published on the 15th June were not circulated in the papers, as in this case we think there would have been greater unanimity on the part of the voters in accepting a reformed College of Surgeons, and in rejecting a

* See MEDICAL GAZETTE, p. 782.

new incorporation. Even Question 1, thus simply put, however, requires a subdivision into two other questions, in order to ascertain the real sentiments of the profession. Each person who records a vote should be requested to state in writing, as concisely as possible, and a limit of half a quarto sheet of paper should be rigorously enforced, what he understands—

1. By a reformed College of Surgeons.
2. By a College representing the interests of general practitioners.

All papers exceeding the proposed limits should be rejected. Our readers will perceive that it would, under this restriction, simply involve the reading of about 11,000 quarto half sheets of copy for England and Wales alone, making rather more than thirteen reams of manuscript!

Seriously, however, unless a man in returning an affirmative answer to Question 1, comes to a clear understanding with his questioner respecting the meaning which he attaches to the words "reformed College of Surgeons," and a representation of the "interests" of general practitioners, the difference of opinion, in spite of the answer, may be as great, and a peaceful settlement of the question as far off, as ever. These objections to the balloting scheme have not been made in a captious spirit. We cannot agree with those who think that mercenary motives alone have actuated our contemporary in diffusing the balloting papers through the pages of the *Lancet*. On the contrary, we believe that there has been a *bona fide* desire to aid the Government in ascertaining the wishes of the majority of medical practitioners in the United Kingdom. The failure has arisen—1st, from restricting the votes to one part of the kingdom; 2d, from giving the power of voting to resident practitioners only, whether legally qualified to prac-

tise in that part of the kingdom or not; 3d, from thereby denying this power to non-resident but qualified English practitioners who may be practising in other parts of the kingdom; 4th, from the vagueness of the questions proposed.

The only fair plan, as it seems to us, for collecting the sentiments of the profession by the aid of balloting papers, is—that every practitioner in the United Kingdom, or out of it, provided he be a member of some British College or Corporation, shall have the power of recording his vote on two simple questions—

Do you assent to the recently published "Resolutions" of the College of Surgeons as the basis of a new Charter?

and, in the event of a negative answer to this question:—

Do you assent to the incorporation of a new College, to be called a College of General Practitioners in Medicine, Surgery, Midwifery, and Pharmacy?

We really look upon these as "United Kingdom" questions, for under a new act regulating the medical profession, immigrant Scotchmen and Irishmen may either be compelled to join the new College, or to give up practice; or if there be a common right of practice established throughout the empire, without local privileges, every Scotch and Irish practitioner should have the power of expressing his opinion on these propositions, because the new College may receive Scotch and Irish, as well as English candidates. On no pretence can this be made a purely "England and Wales" question: we might as well limit the votes to practitioners of a certain stature or weight. Still less can it be conceded, in accordance with the views of the members of the National Institute, that this is a "General Practitioner" question. The foundation of a new College of Medicine in England, Scotland, or Ireland, is surely a subject

of national interest, and it is with regret we find any attempt made in the present day to determine such a question as this by collecting the votes of one section of the profession in one part of the empire. The Council of the National Institute have announced their intention "to ascertain with as little delay as possible the real wishes and opinions of the general practitioners on the points at issue, and on the main principles of medical reform." But who are the "General practitioners?" If they are the possessors of the College diploma and Hall license, they amount to 4688, out of nearly 11,000 practising members of the profession in England and Wales: if the possessors of the College diploma alone, they amount to 1863; and if of the Hall license alone, to 1036. Their numbers are thus easily reckoned up. It is the plain duty of the Institute to define under what qualification or qualifications they include a "General practitioner." Giving them the benefit of the greatest number, they barely constitute one-half of the practising members of the profession; and supposing all of these to concur in the views of the Institute, it is not to be imagined that any minister would legislate to control the profession of the whole of the United Kingdom according to the wishes of a section in England and Wales. If, as we have reason to believe, there is a very great difference of opinion among themselves respecting the institution of a new College, this must of course be fatal to their expectations. The collecting of the votes by this body, will therefore, we consider, inevitably lead to its dissolution. They are not sufficiently numerous to bind the whole profession of the empire, and the numerical results may possibly show a greater disagreement among themselves than has hitherto been supposed to exist.

LECTURES
ON THE
TREATMENT OF DELIRIUM AND
COMA;

(IN SEQUEL TO THE LUMLELAN LECTURES
FOR 1850;)

Delivered at King's College Hospital,

By R. B. TODD, M.D., F.R.S.

(Reported by MR. LIONEL S. BEALE, Med. Associate K.C.L.)

LECTURE II.

Distinction between true delirium tremens and delirium e potu—Analogue distinction in cases of opium-poisoning—Treatment of the milder form of delirium tremens—Case—Treatment of the more intense form—Mode of feeding—Means of restraint—Influence of persuasion—Case—Use of opium—Morphia—Quinine and opium—Tartar emetic and opium—Cold—Chloroform—Cases.

GENTLEMEN,—I propose now to proceed with the treatment of the various kinds of delirium; and I shall take first that of delirium tremens, not only because it is that form of delirium which you have the most frequent opportunities of witnessing in hospital practice, but also because the treatment which is best suited to it is also in a great degree applicable to most of the other forms of delirium.

By delirium tremens I mean that state which comes on sooner or later in all persons addicted to habits of intemperance. Many practical men recognise two kinds of delirium tremens; but it would, as it seems to me, be more correct to consider these as two distinct forms of delirium, closely allied, however, inasmuch as they both may arise from intemperance.

The first is the true delirium tremens of drunkards, — *delirium ebriosorum*; the second is the delirium from alcohol, — the *delirium e potu*, which may occur in a man who is habitually the most temperate. As I go on you will see the importance of this distinction.

The one occurs in a habitual drunkard, — the other may occur in a person drinking for the first time. One is frequently the precursor of the other.

If a temperate man be led to drink excessively, the second form soon comes on, arising from the poison of alcohol interfering with the healthy action of the brain; but if he become a habitual drunkard, he is subject to attacks of the true delirium tremens, under particular circumstances. In this case,

however, the poison is not alcohol, but a compound formed of alcohol and perhaps some morbid matter generated in the system.

The true delirium tremens is the delirium of a man who, having long indulged in his cups, has by some means or other been depressed, or prevented from taking his accustomed amount of stimuli.

The delirium e potu is the delirium of a man whose blood has become charged with alcohol: it is a case of active poisoning, the poison being alcohol: but we know this cannot be the case in the delirium of drunkards, because the exhibition of alcohol in some form or other is known by experience to constitute a most important part of the treatment of the disease; as if alcohol, within certain limits, were an antidote to the poison which disturbs the nutrition of the brain.

If these distinctions be correct, it is obviously of vast importance to recognise clearly the two maladies, as an essentially different treatment would be required. In the one case you have to deal with delirium supervening upon a disease in which the powers of life have been greatly impaired by a course of slow poisoning: in the other you have to oppose by your treatment the mischief done by the introduction of alcohol, and to eliminate this poison from the system.

You have very much the same difference in cases of opium-poisoning as in that of poisoning by alcohol. Habitual opium-eaters are liable to a form of delirium which closely resembles the true delirium tremens, and which, like it, is apt to come on when they are deprived of their accustomed supply of opium. But the rapid administration of opium in large quantity will excite a state of delirium which very speedily passes into profound coma. In the one case, the administration of a certain quantity of opium, or of some other sedative, is essential to the cure; in the other case, the introduction of any more opium into the system would inevitably destroy the patient, or greatly increase his peril.

It is important to observe that these two kinds of delirium may be mixed: they may occur in the same patient at the same time. A man, habitually intemperate, whose blood is already poisoned by the peculiar poison of delirium tremens, and who has had the horrors, and many other of the symptoms of delirium tremens, sits down to a bout of drinking, and alcohol enters his blood in large quantity. Thus he becomes at once the subject of two states, of which, however, the delirium e potu would evidently predominate. In such cases the treatment evidently becomes much compli-

cated, and it would obviously be desirable to eliminate the free alcohol from the system before you can deal with the delirium tremens.

I shall now proceed to the consideration of the treatment of the true delirium tremens, which we meet with very commonly in hospital practice, both in a mild and in a more intense form.

I. The milder form of the disease is characterised by the occurrence of horrors, hallucinations, tremor, vigilia. In such cases the patient fancies he sees demons, or dragons, or insects creeping over his bed, or flying in the air; he is suspicious, and thinks every body is combining against him to do him some injury; or he dreads some impending evil, and fancies himself about to die, or to fall into misfortune. With some or all of these symptoms there is more or less of tremor accompanying the voluntary motions. If you ask the patient to hold out his hand, he does so with a remarkable and characteristic tremor: this tremor interferes greatly with the due performance of many acts which require a nice muscular adjustment: he cannot hold and direct his pen properly: he is a long time about buttoning his coat or his breeches, or tying his cravat: to pick up a pin, or neatly insert it into any part of his garments, is quite beyond his power. So also if you make him shut his eyes strongly, or protrude his tongue, you witness the same characteristic tremulousness in those actions. He finds it difficult to obtain sleep, and if he does sleep it is only for short periods, frequently being waked up in a fright by horrible dreams, or with nightmare. With all these symptoms of disturbance of the nervous centres, the patient's skin is moist, often perspiring freely, his tongue is clean, and his pulse soft, and not quick.

In every case of this kind it is important to remember that the balance of nutrition, so to speak, is disturbed by some cause,—either by the want of proper food, from loss of appetite or from the inability to procure it, as we often find with our poor hospital patients; or by the impairment of the functions of the stomach, through the repeated use of stimulants, so that the patient is unable to retain or digest nutritious food.

The great object of treatment, therefore, is, to restore the balance of nutrition and to procure sleep, in which, if you succeed, you cure your patient in a very few days. It generally happens in these mild cases that the discipline, the regular hours, and the care to which the patients are subjected in a hospital, restore them to health with very little medical interference.

I shall best illustrate what I have said upon this subject by relating the particulars of the following case, which occurred in the hospital.

Henry Arden, æt. 29, admitted on the 2d of last July. It appeared that his health had been good until nine months ago, when he suffered from some indisposition the nature of which he could not explain. He professed, however, to have derived great benefit from drinking porter early in the morning. From this time he acquired the habit of drinking large quantities of porter, the average amount being, according to his own confession, from four to five pints daily.

Two months before his admission he began to suffer from dyspeptic symptoms, with loss of appetite, for which he was treated as an out-patient at the hospital. From this time we may date the derangement in the balance of nutrition. The medicine prescribed for him on the 29th of June seems to have caused some nausea. He left off taking his porter: in his own words, he felt something rise from his chest to his head, and this sensation was accompanied by a disturbed state of consciousness, under the influence of which he fancied himself to be walking about the house, opening the windows, and gazing upon a succession of figures which passed before him holding lighted tapers, and which at other times assumed the appearance of shadows flitting by the window, and every now and then looking into his chamber. This was the commencement of the disturbance of the cerebral functions. These hallucinations continuing, he was admitted to hospital on the 2d of July.

On admission he exhibited the characteristic tremors in all his movements,—pallid countenance,—sleeplessness,—and the hallucinations which I have described,—all the usual signs of incipient delirium tremens. From the 29th of June to the 2d of July he had not closed his eyes in sleep.

Now this patient was simply put upon a regulated diet: he was allowed a pint of porter daily, and a moderate quantity of meat, and was ordered half a grain of morphia every night.

On the night of his admission he slept for the first time for four nights, and also on the subsequent nights, and on the 5th all hallucinations had disappeared, and the tremulousness was less. On the 12th he was quite well in every respect, excepting that some degree of tremulousness remained.

This case afforded a good example of one of the many forms which the hallucinations that haunt these patients are apt to assume. It is an interesting but difficult

problem to enquire what it is which determines the particular nature of the hallucination in each case;—in some degree, no doubt, the peculiar temperament of the individual, and also, perhaps, the bent of his thoughts and inclinations in his sane condition: but we cannot enter upon this subject now.

Cases of this kind, as I have already said, are of very frequent occurrence in the hospital; and we also frequently find that regularity of diet and proper food are sufficient to restore the balance of nutrition. We should, however, bear in mind that in all cases of delirium tremens it is of primary importance to procure sleep for our patient; and for this object I confess that I know nothing so effectual as opium given in the crude state, or in the form of tincture or morphia; or, should you have any reason to suppose that the preparations of opium disagree, you may try some other sedative remedies—camphor, hyoscyamus, hop, &c. &c. Should antiphlogistic remedies be given in these cases? We have no inflammation to subdue, and therefore there is no need for remedies of this class; our main point is to restore nutrition by means most germane to the digestive organs. And I would here guard you against following any routine practice in the use of purgatives. If you have any reason to believe that your patient would receive benefit from a slight purge, by all means prescribe accordingly; but if his bowels are regular, there can be little use in giving him active purgatives.

II. We have now to consider the treatment of the more intense or the confirmed delirium tremens. The patient has passed through the stage in which the horrors occur, and is now in a state of restless, and more or less violent delirium. In deciding upon the appropriate treatment of such cases as these, we must look in the first instance to the immediate cause which has disturbed the balance of nutrition. We shall find this to be either that he has been deprived of food by dire want, or that his stomach has become so irritable that he rejects everything that he takes. I say it is important to determine the cause of this disturbed nutrition, because our first endeavour must be to induce our patient to take nourishing food. This will be easily enough effected if the patient had been deprived of food from necessity, or if his appetite had been impaired; and it is best to administer the food in small quantities at a time, but frequently repeated. An ounce, or an ounce and a half, of mutton-chop may be given every two or three hours; or small quantities of some good animal broth or soup. The most difficult case

to deal with is where the stomach has become extremely irritable, and rejects the food. Under such circumstances the greatest nicety is required in the administration of nutriment. If the stomach will not bear solid food or animal broths, milk may be given, the caseine of which may serve for solid food; but it must be given in small quantities at a time, and it may be combined with lime-water, or sometimes even with very small quantities of some alcoholic stimulant—brandy, rum, and gin, it being generally better to select that stimulant which the patient has been accustomed to drink. The patient may be able to retain nourishment of this kind if given in tablespoonfuls, or even teaspoonfuls, at a time, while, if larger quantities were administered, vomiting would ensue.

At the same time, we may with advantage attempt to allay the irritability of the stomach by other means likewise—as by giving ammonia in effervescence, or the common effervescing draught of soda or potash, or by prussic acid given with or without effervescing medicines; or we may have recourse to a very useful and effective remedy—kresote combined with morphia, in small doses in the form of pills. Ice water, or small quantities of the pure Wenham Lake ice, will allay the irritable stomach when other means fail. Counter-irritation over the region of the stomach may be also employed with benefit—as mustard poultices, or flannels wrung out of hot water and sprinkled with turpentine.

The mucous membrane of the stomach is no doubt in these cases sometimes in a state of actual inflammation, or nearly approaching to it, although less frequently so than many suppose; and it may be desirable to apply leeches to the epigastrium; but, as a general rule, it behoves us to be cautious about taking blood in these cases.

I need scarcely add, that in all cases where the stomach is highly irritable it is very important to have the bowels freely evacuated, either by purgatives or by enema.

Let us now suppose that your patient, not having slept for many hours, is in a state of delirium so violent that he cannot be kept in bed, and is with difficulty kept from injuring himself or others; how are we to act in such a case?

There are three points to which your attention must be especially directed:—

1. The due administration of nourishment.

2. The means of restraint.

3. How to procure sleep.

I have already sufficiently considered the first point, and shall only add, that whatever the nature of the delirium, this point is primary and paramount.

2dly. With regard to the question of restraint, it is obviously of the greatest importance that the patient should be restrained from injuring himself and others, and that he should be kept in a horizontal posture, as not tending to exhaust, and most favourable to sleep; but I caution you from being tempted by the solicitation of the friends or attendants of the patient, to use the straight waistcoat in any case in which it can possibly be avoided: although, in one sense, secure, it is a bad practice.

Undoubtedly the straight waistcoat is a very effectual means of restraining the patient, and is the best means you can use if restraint were your sole object; but as you likewise want to procure sleep, and to preserve strength, you will often find its use incompatible with those objects. It is far better to provide one or more attendants, who, by careful watching, kind persuasion, and the influence which the presence of a superior force exerts even over a delirious patient, will succeed in keeping him quiet without personal restraint.

If you watch a patient tied down by the straight waistcoat, you will at once see what is the main objection to it as a means of restraint. You will perceive that the patient is continually using the most forcible efforts to extricate himself from it. The pressure upon his arms and legs excites in his mind the idea that he is held down by persons who are bent to torment him, and thus his delirium is kept up or increased, and he uses all his might to free himself from his imaginary tormentors. These efforts are generally accompanied by violent perspiration, and are followed by extreme exhaustion; and they are obviously greatly opposed to any efforts we may make to procure sleep and to restore the balance of nutrition.

Sometimes, however, it is right to notice, the "restraint by watching" does not succeed so well as the straight waistcoat. You may remember a remarkable instance of this which occurred lately in a patient upon whom Mr. Ferguson performed the Talisacottian operation for a new nose; this man was brought up to the physicians' wards with erysipelas and violent delirium; he was extremely loquacious, and the presence of others kept up his tendency to talk incessantly.

In this case, after having tried the watching plan for a day or two, we gave it up, and applied the straight waistcoat, at the same time isolating the patient by surrounding his bed with screens. The attendants were removed, and no one came near him except the nurse, who every now and then gave him food or medicine. This plan was immediately and perfectly successful.

It is in cases of this description that it is often useful to put a patient into a padded room in which he cannot injure himself, and leave him there in complete solitude and darkness. We have not the means of adopting this practice in ordinary hospital or in private practice; but it may be imitated to a great extent. The obvious objection to it is suggested by the proverb—"out of sight out of mind"—namely, the danger that the attendant may neglect to give the supplies at proper times, from not seeing the patient or being in the same apartment with him.

We may sometimes succeed in quieting a delirious patient by calling in the aid of some friend, or other person known to possess considerable influence over him; and it is well to bear this in mind as a valuable expedient when other means fail.

Two or three years ago I was called to see a law student, of intemperate habits, who was living in lodgings; he was suffering under violent delirium tremens. The patient obstinately refused all food and medicine, and no persuasion that his medical and other attendants could use seemed to have the slightest weight with him. The delirium took the turn of the most ardent religious excitement, and the patient being a Roman Catholic, was continually on his knees, praying unceasingly, and with the most extraordinary volubility of tongue, to the Virgin Mary. Knowing the influence which the Roman Catholic clergy often acquire over particular members of their flocks, it occurred to me to call in the aid of the priest in this case. He came, and was closeted with the patient for a very short time, and when we were admitted, we found, to our great relief and satisfaction, that a most wonderful change had taken place, and that our patient had become quite tractable and obedient. He took food and opium, and speedily recovered.

3d. To procure sleep there is no remedy, as I mentioned before, better than crude opium or laudanum. Theory recommends these preparations because they are known to contain all the active principles of the opium, and therefore the chances of obtaining the sedative and narcotic influence are greater with opium than with morphia. Practice recommends them, because in many persons opium is not so liable to disagree with the stomach as morphia. Many people have the idiosyncrasy of being influenced by morphia as by an emetic. I have seen morphia produce as severe an emetic and nauseating effect as if the patient had taken tartar emetic. I may refer here to the case of a lady for whom I occasionally prescribe, who is so susceptible of the emetic influence of this drug, that she immediately detects it in whatever dose it

may be given, or however it may be concealed. And opium, although it cannot be said to agree perfectly with her, does not produce the same nauseating effect.

When you give opium, do not be timid with it. Give a full dose at once, two or three grains, or a drachm of the tincture, and be guided by the progress of the case as to the frequency of its repetition and the amount of the subsequent doses.

The combination of camphor with opium frequently counteracts the unfavourable, and promotes the sedative influence of the latter. But I know no combination which, generally speaking, answers better in delirium tremens, especially where there is much depression, than that of quinine with opium. One or two grains of quinine, with from ten to thirty drops of laudanum, given every four, six, or eight hours, often answer extremely well.

Many practitioners, and amongst them some whose opinion is entitled to the greatest respect, have recommended a combination of tartar emetic and opium, and place great faith in this admixture; but I think a fallacy may exist here, in the fact that opium undoubtedly modifies and controls to a great extent the action of tartar emetic, so that in fact, whilst administering the two drugs, we may in truth be simply giving opium. If you could always succeed in limiting the influence of the tartar emetic to its simply alterative effects, there would be no objection to its use, as its action on the skin would materially assist in eliminating poisonous matters from the system, but its depressing influence does positive harm, and is not always so readily counteracted as is desirable. For this reason I seldom or never have recourse to this combination.

Another expedient which you should keep in view, as a means of quieting delirious patients, is the application of cold to the head, either by a bladder of ice or by the use of the cold douche. Both, you must remember, are powerful agents, and tend to produce depression of the heart's action, which may be carried to such an extent as to kill the patient, if the douche be applied too powerfully, or the ice be kept applied too long.

Sometimes, when we have persevered with opium for some time, the pupil becomes contracted, and yet the patient does not sleep. In such a case we are to persist in giving opium? I think a very contracted state of the pupils ought always to be taken by the practitioner as a strong indication against the further use of opium, and that then he may have recourse to other sedatives. Under such circumstances I incline to think we have a most valuable resource in the administration of chloro-

form by inhalation, but I have not as yet had sufficient experience of its effects to justify me in speaking very positively respecting it. I shall relate to you three cases, in which its use was followed by the most happy results.

The first case was that of a man in the hospital, who had been two days under treatment, and had taken plenty of nourishment and opium, and the pupils were so contracted that we were afraid to persist in the use of the latter. I therefore determined to try the inhalation of chloroform, and had it administered while I was in the ward, taking care to feel the pulse during its inhalation. The man was soon under its influence, and slept continuously for 22 hours, only waking once during this time to take nourishment. The report in the case-book states that this was the first sleep the patient had had for five days. He soon got quite well.

The second case likewise occurred in the hospital: opium, although not tried so long as in the first case, failed to produce sleep: chloroform was administered; the patient slept all that night, and the next morning was perfectly quiet, and soon went out restored in health.

A third case occurred in private practice, in a patient whom I saw with Mr. Simon. He had been treated in the most careful and judicious manner previously to my seeing him, and opium had been freely given without causing sleep, whilst it produced contracted pupils. It was now a question as to the propriety of administering chloroform, and I had no difficulty in agreeing with Mr. Simon to give it. It was accordingly done, although to effect it we had to use force: the patient slept soundly after it, and recovered very speedily.

But I find that I have already trespassed too much upon your time. I must, therefore, reserve several other points connected with the treatment of delirium tremens till our next lecture.

OBITUARY.

On the 11th ult., at Aberdeen, N.B., after some days' illness, Dr. Philip Tidyman, of Charleston, South Carolina, in the 73d year of his age.

On the 15th inst., at Balham Hill, in the 38th year of his age, S. K. Parson, Assistant-Surgeon, Hon. East India Company's Service, eldest son of the late Rev. Joseph Parson.

On the 13th inst., at Calais, after a long illness (on his way to London from Paris), Dr. Kirby, M.D., aged 76. He was at the battles of Salamanca and Waterloo.

On the 16th inst., in London, Richard Kennard, Esq., M.D., of West Malling, Kent, in the 63d year of his age.

Reviews.

The Treatment of Secondary, Constitutional, and Confirmed Syphilis, by a safe and successful method; with numerous cases and clinical observations, illustrating its efficacy and mode of application in the more obstinate and complicated forms of the disease. By LANGSTON PARKER, Surgeon to the Queen's Hospital, and Professor of Anatomy and Physiology in Queen's College, Birmingham, &c. &c. 12mo. pp. 112. London: Churchill. 1850.

MR. PARKER considers that it is nearly impossible in this country to cure syphilis without mercury. At the same time, he thinks "that the ordinary modes of its exhibition not only frequently fail in curing the disease for which it is given, but a class of affections are constantly produced which are the result of mercurial treatment; so that, on many forms of constitutional syphilis being presented to our notice, it is difficult to say how much is the result of specific disease, and how much due to the remedy which has been employed for its cure."

The intention of the work before us is to bring under the notice of the profession the method which Mr. Parker employs in the cure of constitutional venereal diseases,—“a method which requires a small amount of internal medicine, is conducted without risk, and, in a vast majority of instances, with a certainty of success, and permanent cure in a short time.”

This method is denominated the “mercurial vapour-bath,” and “consists in surrounding the patient with an atmosphere of mercurial vapour in a moist state.” It has, according to Mr. Parker, all the advantages and none of the disadvantages of best-conducted ordinary modes of mercurial treatment.

We extract the following account of its mode of application:—

“The patient is placed on a chair, and covered with an oilcloth lined with flannel, which is supported by a proper framework. Under the chair are placed a copper bath, containing water, and a metal plate, on which is placed from one to three drachms of the bisulphuret of mercury, or the same quantity of the grey oxide, or the binocide. Under each of these is a spirit

lamp. The patient is thus exposed to the influence of three agents,—heated air, common steam, and the vapour of mercury, which is thus applied to the whole surface of the body in a moist state. After the patient has remained in the bath from five to ten minutes, perspiration generally commences; and, by the end of twenty or thirty minutes, beyond which I do not prolong the bath, it is generally excessive. The lamps are now removed, and the temperature gradually allowed to sink: when the patient has become moderately cool the coverings are removed, and the body rubbed dry. The patient is suffered to repose in an arm-chair for a short time, during which he drinks a cup of warm decoction of guaiacum, sweetened with syrup of sarsaparilla."

This method requires modifying according to the peculiarities of individual cases. The nature and extent of the modifications are pointed out by Mr. Parker. These, as well as the indications which furnish guidance for the selection of any particular mercurial preparation, are well illustrated by the numerous cases which are given by Mr. Parker.

A short preparatory treatment is advised by the author before using the baths. The use of these does not require that the patient should forego his ordinary occupations of business, or that he should be confined to the house during its use.

Very little medicine is required to be administered internally during the use of the baths. Mr. Parker states that he "never saw the most delicate patient, either male or female, whose health was injured under the plan I recommend," and "I have very rarely seen a disease that has not been cured without a relapse. The experience derived from the treatment of many hundred cases warrants me in speaking thus positively on the subject."

A new method of treatment for this obstinate class of diseases, having such strong pretensions to certainty and safety, should receive the attention of surgeons, come whence it may; but, when introduced to their notice by a surgeon of Mr. Parker's standing, it becomes even more imperatively their duty to give it a fair and extended trial. We entertain no doubt that Mr. Parker's high estimate of this method of treatment will meet with confirmation from the experience of his surgical brethren.

Revelations of Egyptian Mysteries. History of the Creation, the causes and progress of the degeneration of nature, the conflagration and manner of the resurrection of the world, as allegorically represented by the Egyptian philosophy; showing the justice of the inculcations of the Ancient Egyptian Priests and Wise Men, teaching that Salt was fatally hurtful to Human Nature; with a discourse on the maintenance and acquisition of Health, on principles in accordance with the Wisdom of the Ancients. By ROBERT HOWARD, Practitioner of Medicine. 8vo. pp. 284. London: Colburn. 1850.

THIS book is a strange jumble of theology, mythology, geology, physiology, pathology, botany, chemistry, philosophy, history, travels, and cosmogonies; the apocryphal and the canonical books of Sacred Writ. It has no feature more prominent than the wildness and looseness of its deductions, the extravagance of its theories, and the incoherency of its facts and arguments.

We see no occasion to waste our space upon extracts from a work the nature of which may be as easily gathered from a glance at its title-page as from its entire perusal; neither can we advise our readers to inflict upon themselves the pain of wading through its pages, to which we, in the performance of our critical duties, have been compelled to submit.

THE PENINSULAR TRIUMPHS OF HOMŒOPATHY.

THIS medical heresy is said to be decidedly in the ascendant in Spain. Two chairs of Homœopathy have been recently instituted under a royal ordonnance, the one clinical and the other theoretical (we thought it had been all theory); and the professors first nominated to these chairs of authorized quackery are Doctors Rio and Nunez. It seems that allopathic medicine has been compelled to succumb in this instance, because the orthodox practitioners foolishly consented to an experimental trial of the system. The results of the first experiments under Dr. Argumosa are not stated, but since the appointments have been made, the experimental system has been laid aside, and we have now grave Spanish professors who propose to lecture on the theory and practice of the greatest delusion of the day.—*L'Union Médicale.*

Proceedings of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, June 11, 1850.

DR. ADDISON, PRESIDENT.

On Fungus Cerebri. By GEORGE LOWE, M.R.C.S., of Burton-on-Trent. [Communicated by FREDERICK SKEY, F.R.S.]

THIS paper was prefaced by the relation of two cases of fungus cerebri. One, that of Charles Kinson, a groom, who on May 14, 1841, received a kick from a horse on the forehead, which occasioned a compound and comminuted fracture of the skull, with laceration of the brain.

Several detached pieces of bone were removed, and one of the size of a sixpence driven deeply into the substance of the brain, not without some difficulty. Their removal was followed by the escape of at least a teaspoonful of brain and some coagulated blood.

Inflammation of the brain came on, and ten days after the accident there was considerable drowsiness, great slowness of reply, and sickness at intervals. The wound was puffy and its edges everted, and protruding through it was a pulsating tumor of a dirty white colour, of the size of a nutmeg, and from its surface a copious oozing of serous fluid.

Pressure on the swelling gave rise to immediate vomiting.

The antiphlogistic treatment was vigorously employed; calomel given at short intervals; lint only applied to the wound and protrusion, and cold applications to the head.

For several days the symptoms of inflammation of the brain were unchecked, the tumor increasing in size until it attained that of a large walnut. It was firm, tense, and its surface covered with serous-like discharge.

On the 26th the patient was decidedly under the influence of mercury. All the symptoms of inflammation of the brain were much abated. The tumor was less, not so moist, and somewhat flaccid, and it had a curious fibrous appearance, as if composed of a number of threads. The man gradually recovered, the tumor becoming more and more fibrous in its appearance; it shrank considerably, and finally sloughed away. His recovery was perfect, and notwithstanding the loss of brain, his strength of mind and body were apparently unimpaired.

The second case was that of — Misses, aged 19, of strumous habit, and having enlarged cervical glands, who received an extensive compound and comminuted fracture of the skull, with depression, from the falling of a brick upon the top of his head. The brain was lacerated and contused, and portions of it escaped from the wound. All the detached portions of bone were carefully removed, and a strictly antiphlogistic treatment was adopted.

About the eighth day symptoms of inflammation of the brain became very threatening, and a fungous growth showed itself in the wound. The antiphlogistic treatment was persisted in, and calomel given in frequently repeated doses. The inflammation of the brain subsided, and the fungus sloughed away, leaving a healthy granulating surface. At the beginning of the fourth week from the time of the accident, he was convalescent, when he ate heartily of beef and other things for dinner.

Headache and fever ensued; the granulations, before healthy, began to bleed; the fungus tumor again made its appearance; coma came on, and he died a month after the receipt of the injury.

After giving the opinions of Mr. Hey, Mr. Abernethy, Sir Astley Cooper, Mr. Stanley, Dr. J. Thomson, Dr. Heunen, Mr. Syme, and Mr. Guthrie, as to the nature of hernia or fungus cerebri, the writer remarked that four varieties of the disease were described by one or other of the authors enumerated, viz. :—

- 1st. That form arising from actual violence, which has partially separated a portion of the brain.
- 2d. That form arising from the protrusion of coagulated blood.
- 3d. That form arising from a protrusion of the brain itself; and
- 4th. That form described as a fungous growth from the surface of the brain.

Of these varieties two only were treated of at length; the first being considered simply as a laceration of the brain, and the second as a modification only of the fourth variety. With respect to the third, or that variety described as arising from a protrusion of the brain itself, arguments were advanced to prove that the cases reported as such were cases of fungous growth from the brain, and not protrusions of that organ; and that there was great reason to doubt that such protrusions of the brain do ever take place. The substance of the tumor being found, in Mr. Stanley's case, to consist of brain-like matter identical and continuous with the brain not proving that the protrusion was really the true substance of the brain forced through the opening in the skull; as granulations, or fungous growth from the brain, would ne-

cessarily partake of the nature of the structure from which they spring, and on dissection present the appearances described by Mr. Stanley. The case related by Van Swieten, as quoted by Mr. Stanley, was also mentioned in support of the view that these brain-like protrusions were not formed of the substance of the brain, it being contended that so large a portion of the brain as equalled the size of a large orange could not be removed without injury to the functions of the brain; whilst, on the contrary, it was easy of belief that a fungous disease, even of larger growth, might be removed with safety from the surface of the brain, or without injury to its functions.

Mr. Hey and Sir Astley Cooper, it was stated, made no mention of the protrusion of the brain itself.

The fourth variety, or that described as a fungous growth, or an excessive granulation from the brain, was considered by the author as the only form of the disease in question, and that its causes appeared to be threefold:—

1st. The loss of a portion of the cranium.

2d. A granulating wound of the brain.

3d. An increased or excited circulation through the brain.

The loss of bone was considered one of the causes of the fungous growth, from its affording an exit to the tumor, and not by occasioning a diminished pressure on the surface of the brain; it being a question whether in health the bone exercises any pressure upon the brain. The size of the opening in the skull has been considered of some importance as a cause of fungus cerebri. It was stated as probable that neither the size of the opening, nor the injury of the dura mater, have so much influence in causing the disease as injury of the brain.

After showing that the process of granulation was the necessary condition of repair after such injuries of the brain as have given rise to fungus cerebri, the question of an excited circulation, and its effects upon the granulations of the brain, were considered.

The dissections of Mr. Stanley, Dr. Hennen, and Dr. J. Thomson, were quoted in proof of the existence of inflammation of the brain and its membranes in cases of fungus cerebri. The existence of inflammation must be accompanied with an increased circulation of blood through the brain.

The soft, yielding, almost pulpy structure of the brain, its great vascularity, and its direct supply of blood from the heart, were pointed out as causes of the granulations of the brain assuming the character

of fungoid disease of the most rapid growth when associated with inflammatory action.

Fungus cerebri was then described as a tumor protruding through the opening in the skull, of a rounded form, but subject to variation, as the aperture was more or less irregular; of a dirty white colour, but often covered with coagulated blood, or its natural colour altered by effusion of blood into its structure; as having a smooth surface, without any appearance of convolutions or bloodvessels; as being firm, tense, and little sensible, exhibiting distinct and regular pulsations; and from its surface a copious exudation or secretion of aqueous fluid having a peculiar odour. This fluid was said to be more or less abundant in proportion to the force of the circulation. It was suggested that it was the natural secretion of cerebral granulations, as pus is the natural secretion from granulations springing from other ulcerated surfaces.

That the tumor appeared sometimes to consist principally of coagulated blood was stated to be owing to an extravasation of blood underneath the dura mater or into the substance of the brain, occasioned by the violence which caused the injury of the bone and brain, and being protruded by the growth of the fungoid granulations; or it might be owing to hemorrhage from the surface or into the centre of the tumor, in consequence of excessive arterial action. Further it was remarked, that the symptoms observed in cases of fungus cerebri were those of inflammation of the brain or its membranes: that the pulse, though stated by Mr. Samuel Cooper to be very frequent in cases of this disease, will be found to vary with the seat, the degree, and the results of the inflammation with which it is associated: that the period at which the fungoid tumor appears will depend upon the occurrence, and upon the coexistence, of granulation and inflammation: that those cases accompanied with hemorrhage from the surface or into the structure of the tumor, and those in which the tumor appears to consist principally of coagulated blood, are attended with the most danger, not from any specific difference in the disease, but because those appearances are evidences of greater vascular excitement, or of more serious injury to the substance of the brain. Much importance was attached to the first management and treatment of compound fractures of the skull, complicated with laceration or injury of the substance of the brain. Every loose splinter or fragment of bone or other extraneous body was recommended to be removed as completely, but as carefully, as possible, the author being of opinion that the many cases of recovery, after

extensive laceration of the brain, and even after the loss of considerable quantities of its substance, prove that the injury to the brain is less to be feared than the inflammation which may ensue, and which would be more likely to occur from the irritating presence of the foreign body than from a slight additional injury inflicted in the attempt to remove it.

These views were supported by references to cases reported by Dr. Hennen, Mr. G. Mallet, Mr. Pollock, and Mr. Harvey, seven cases in all, six of which proved fatal from inflammation of the brain, and on dissection splinters or spicula of bone were found imbedded in the brain.

If inflammation of the brain and fungus cerebri supervene, the strictest antiphlogistic treatment, the exhibition of calomel with or without opium, as the case may require, and the application of blisters to the nape of the neck, were the means of cure recommended to be put into practice.

The only local application to the wound and protrusion to be dry lint, covered with oiled silk, so as to allow of the assiduous use of refrigerants to the scalp. If, after all symptoms of inflammation have subsided, the fungus should not decrease, in consequence of local want of action, as may be the case in strumous and enfeebled constitutions, a tonic system of treatment, and gentle pressure upon the fungus, would, it was suggested, prove beneficial.

The author concluded his paper by inquiring how the lost brain was restored in cases where portions of that organ have been destroyed, and by expressing his belief that, from the rapid growth of cerebral granulations, the loss of brain was replaced by the formation of new matter resembling it; and further, from the apparently trifling injury to the faculties in cases of recovery, even after the loss of brain has been considerable, it was at least probable that the new formation was capable of carrying on the functions of the original cerebral substance.

ROYAL INSTITUTION.

Friday, June 7.

Phenomena connected with the Freezing of Water.—Great Purity of Ice-Water.

It is not perhaps generally known that, during the act of congelation, the molecules of water expel from them gases, acids, alkalis, salts, and all kinds of foreign matter previously dissolved or diffused through the water.

This was illustrated by Mr. Faraday, in

an interesting lecture, delivered by him at the Royal Institution on the 7th instant, by a series of ingenious experiments. The position assumed by the lecturer was, that water carefully frozen was to be regarded as absolutely pure. All foreign matters are expelled: air only is reabsorbed during the melting of the ice. Common spring water was proved to contain chlorides, and it gave an abundant white precipitate when nitrate of silver was added. A portion of the same water frozen in a tube plunged into a freezing mixture, was converted into a hollow cylinder of ice: the middle or liquid portion, containing the saline matter expelled during freezing, was poured off, and the cavity washed with distilled water. The hollow cylinder of ice thus obtained was melted in a glass, and the water thence arising gave no precipitate on the addition of nitrate of silver.

By the aid of nitrate of barytes it was proved that *sulphuric acid* was thus entirely expelled from the ice obtained by freezing the diluted acid; and by alkaline test paper, *ammonia* was proved to be entirely expelled from its weak solution in water. The freezing of diluted *sulphate of indigo* was attended with the extraordinary result, that all the blue colouring matter was expelled, and a *colourless* cylinder of pure ice was procured. The expulsion of these foreign matters during congelation was aided by gently stirring the freezing liquid with a feather.

Mr. Faraday referred to the great purity of Wenham lake ice, and its marvellous freedom from air, even in the thickest blocks, a phenomenon of which he considered as yet there was no satisfactory explanation. He then, by the aid of a heated tin vessel, cast a very perfect double convex lens of the ice, and proved by the refracted image of a lamp on a white screen, that its focal distance was about three feet.

Mr. Faraday adverted to the absurd notion which had prevailed, that the ice of the American lakes, as brought to this country, was *colder* than English ice. At whatever degree of temperature ice may be produced, it is always at 32° in every atmosphere above this temperature, until all is melted. As in all other solids, the distribution of caloric takes place so rapidly in ice at temperatures below 32°, that it very soon acquires that of the surrounding medium to whatever temperature it may have been previously cooled. The slow melting of the Wenham lake ice is owing to its great compactness, and its being imported in very large blocks.

The water which results from melting ice being very pure, would exert a strong chemical action on lead: hence it would be unsafe to employ for drinking purposes

water which had been derived from melted ice and preserved in a leaden cistern.

It has been lately discovered that absolutely pure water, free from air, has its leading point not at 212°, but at a temperature of about 270°. When pure water reaches this temperature, it suddenly becomes converted into steam with explosive violence; and, unless care be taken, with great danger to the operator. In order to illustrate this singular phenomenon, a piece of pure Wenham lake ice was dropped through some oil contained in a tube. The oil prevented the absorption of air during melting, and when the requisite temperature (270°) was reached, the vessel containing the oil and melted ice was suddenly blown to pieces. Pure water un-aerated does not simmer or give any indication of boiling: it is suddenly and instantaneously converted into an enormous volume of vapour like a fulminating compound. A power of regulating and controlling the force of steam would be therefore entirely unknown to us, except for the presence of air and saline matters in waters.

SURGICAL SOCIETY OF PARIS.

June 6, 1850.

PRESIDENT, M. DEGUISE, *père*.

Extensive Loss of Substance of the Face from Gangrene.

M. GUERANT presented a patient, a girl of eleven years of age, in whom, from a gangrenous affection, extensive destruction of the lips and cheek on the right side had occurred. M. Guerant asked the opinion of the Society, whether the injury might not be remedied to some extent by the division of the cicatrices which prevented the movement of the maxilla, and by the supply of flaps from the chin and cheek.

MM. DEGUISE *fils*, and LENOIR, were of opinion that little or no good would result from the operation. Several other members were in favour of its performance.

Large Vesical Calculus removed by the high operation.

This calculus weighed (187 grammes) between five and six ounces, of an ovoid form, six centimetres (= 2.362 Eng. inches) in length, and four (= 1.574 Eng. inches) in diameter. It appeared to have been forming during five years, during four and a half of which it had caused very great distress. The operation was simple, but the extraction somewhat difficult on account of the size of the stone. The patient recovered speedily, and quitted Paris a few

days after the operation had been performed by M. Maisonneuve.

ACADEMY OF SCIENCES, PARIS.

June 8, 1850.

Determination of the Place of Fecundation in the Superior Vertebrate Animals.

M. COSTE read a note on this subject, in which he disputed the opinion at present generally held by physiologists, that the ovum, spontaneously discharged, may be fecundated by coming in contact with the semen at any point between the ovary and the external orifice of the uterus. This opinion, M. Coste observed, had been received too readily, on account of its harmonising with the modern theories of spontaneous ovulation. It has not been noticed, M. Coste remarked, that the ova lose their integrity at the distance from the ovary that they are said to be capable of fecundation. In order to determine this point, M. Coste had examined the ova of birds and mammalia from ten to twelve hours after their discharge from the ovaries, and had found that those present in the Fallopian tubes, and not fecundated, exhibited evident signs of commencing decomposition. If, then, argued M. Coste, after so short a residence in the tube that they had not traversed the first half of its length, the ova already showed signs of decomposition, it is clear that they can no longer be susceptible of fecundation by contact with the seminal fluid.

M. Coste deduced from his observations that fecundation can only take place at the ovary, the mouth of the Fallopian tube, or in the first third of that canal.

A newly-discovered Anastomosis between the Vena Portæ and the Vena Cava Inferior.

M. CLAUDE BERNARD described the following vascular arrangement which he had discovered, and the use of which he stated to be the direct mingling of the abdominal portal blood with the systemic venous blood. Immediately after the portal vein has entered the liver, frequently a little before that, a certain number of branches are detached, and are distributed, some superficially, some more profoundly, in the substance of the liver to the right of the vena cava. The greater number of these branches ramify on the external surface of the vena cava, where, however, they do not constitute *vasa vasorum*, but instead of becoming subdivided into capillaries they

abruptly enter the cavity of the vein; either singly, or by the union of several, forming a dilatation or common reservoir which communicates directly with the interior of the vein. These anastomotic vessels are devoid of valves. The walls of these vessels partake of the structural characters of the vena porta; while the branches of the sub-hepatic veins exhibit very distinctly the muscular structure of the hepatic portion of the vena cava inferior. The orifices of these portal vessels are further distinguishable from the sub-hepatic veins by their regularity and their longitudinal direction with regard to the muscular fibres of the vena cava inferior.

This system of direct communication between the vena cava and vena porta, does not exist only at the entrance of the liver, but is seen equally extensively in the depth of the organ and on the larger trunks of the hepatic vein, especially in the neighbourhood of their insertion into the trunk of the vena cava inferior. These vessels, M. Coote observed, constitute a true collateral hepatic circulation.

Hospital and Infirmary Reports.

FELLOWS' PRIZE REPORTS OF

CASES OCCURRING IN UNIVERSITY
COLLEGE HOSPITAL,
SUMMER SESSION 1845.

By C. H. F. ROUTH, M.D. Lond.

JOHN HILL, æt. 32; admitted Tuesday, July 15, 1845, under Dr. Williams.

CASE.—*Aneurism of the ascending part of the Aorta—obstructive (?) and regurgitant disease of the Aortic valve—Hypertrophy of the left ventricle.*

Short of stature, stout conformation, bilio-sanguine temperament. Of a dark ruddy complexion. By occupation a labourer for the last twenty years without interruption. Married for the last six years, but has no children. Is a native of Berks, but has resided at Clapham Common for the last six months. He lives in a damp and close house: previously to this in Lambeth, for three and a half years, in a dry and open locality: in London for the last eight years. Lately his habits have been regular. He takes meat once a day, sometimes twice, and lately has only drank about Oj. of beer in the day; sometimes he has had none for a whole week. About

four years since, however, he drank immoderately, generally Oiv. of porter, and sometimes in addition, Oss. when wet: generally drunk once a month. Lately he has avoided all alcoholic liquors. He has generally had enough to eat, though occasionally on short commons when out of work. For the last eight years his labour has been rather heavy: he has been engaged in a cement manufactory, lifting up heavy weights, usually of about 1 cwt. The smell of the manufactory is neither offensive nor close, but it is very dusty. Sleeps well in health, generally from six to seven hours, going to bed at about nine or ten, and up again at five A.M. Disposition cheerful.

Hereditary predisposition.—Father alive; between 60 and 70 years old. Was always healthy, not suffering from any cardiac disease that he is aware of. Mother died at about 50, but not suddenly, and he does not know of what disease. His brothers and sisters are all healthy; nor is he aware that any of his relations have had any cardiac disease, or have died suddenly.

Habitual state of health.—He himself has been generally stout and healthy. The only complaint he ever remembers to have had was measles when quite a child. Never had whooping-cough. Last winter had a slight cough; but it was only a slight one, nor was it accompanied with any pain in the place where the pulsating tumor now exists. Never had hæmoptysis.

Present attack.—About twelve months ago he was at work in a cement manufactory, carrying a weight of about 1 cwt. He had been engaged in the same duty for several days previous, and had felt no inconvenience from it before. *On this occasion, however, when in the act of lifting a weight, he felt something "give way" in his chest, and this was immediately followed by a severe burning pain beneath the right breast, opposite the sixth rib, which lasted about five minutes, and then went off. There was, however, no palpitation. He took no further heed of it, and continued his work as before; occupied about two days in the week in lifting up weights. He continued, as he thought, well for a month. At the end of this period, when lifting up another weight, he felt the same sensation, followed by the burning pain, which now lasted about ten minutes, was more severe, though unaccompanied by palpitation. At the end of the ten minutes it went off as before, and he was enabled to resume his occupation. About a week or so afterwards, when he was "stooping at work with a shovel, filling some baskets with stones," the pain again recurred. It did not last longer than ten minutes, and again went off. From this period he was enabled occasionally to lift up weights*

without inconvenience; still frequently the pain would recur. It would also sometimes last longer, about a quarter of an hour, but sometimes only ten minutes, sometimes a shorter period. About six months ago he first began to suffer from dyspnoea, and became gradually worse, the pains recurring on the slightest exertion, and lasting about fifteen minutes each time. The dyspnoea and pain increased till about five weeks ago, when it would come on even with walking, so that he was obliged to give up work altogether. He had had a slight cough, but none at this time.

He remained quiet at home for about a month. Getting no better, he consulted Mr. Andrews, surgeon, Vauxhall. At this time he had no cough: he could not walk the distance of the ward without feeling the pain return and the dyspnoea increase. His spirits, however, and appetite were good. This gentleman examined his chest. He was recommended to abstain from spirits, remain quiet, and medicine given him. Under this treatment he improved a good deal, so as to be able to walk with greater ease: at the end of this period, however, he became an inmate in this hospital.

Present state.—Colour of skin over trunk natural: no eruption. He says he is thinner than formerly, but in appearance he is decidedly stout. No anasarca. Does not seem to prefer any particular position to lie in. He cannot walk twice the length of the ward without feeling a pain at the heart, shooting, with a hot tingling sensation down the right arm. There is also much cardiac palpitation, and slight pain under the right breast. These symptoms usually disappear in about ten minutes. No rigors. Skin cool and moist. No night sweats. Weaker than formerly, but not particularly restless. Cheeks and lips rather red: pupils natural. The other organs of the sense are unaffected. No headache or giddiness: sleeps well. The feet have lately felt somewhat cold. No pain or weakness across the loins.

Thoracic organs.—Chest moves but little, respiration being chiefly diaphragmatic. There is a slight pulsation felt at the inner side, near the sternum, between the third and fourth ribs (right side). The pulsation is also visible when he sits up, but not in the recumbent position. There is also a fulness on the right side, near and about it. Behind there is a slight inclination of the spine to the left side.

Chest measures, just below the nipples, 37½ inches round: the right half 19 inches. The pulsation of the heart is felt most distinctly between the sixth and seventh ribs (left side). The patient placed in a recum-

bent position, a tremor was felt with the hand over the whole chest, much strengthened and extended by the erect position. The tremor was felt strongest in the plane of the visible pulsation, between the third and fourth ribs (right side), and the portion of the sternum immediately adjoining. Cardiac dulness begins at the left middle of the sternum, extending transversely 1 inch external to the nipple, reaching as high as the fourth rib; complete dulness being on the fifth rib, and reaching as low as the seventh rib, extends transversely to about 1 inch external to the nipple. Over the pulsating point there is little dulness compared with the parts around; but this is not well marked; it is more evident on strong than on gentle percussion, and the sound has a higher key. The hepatic dulness reaches as high as between fifth and sixth ribs.

The left infraclavicular region is duller than the right, the dulness being more marked on and above the clavicle. The respiration is weak; but the loudness of a single rasping sound, which is heard in both these situations, and loudest on the left side, prevents the respiration being clearly made out. This single rasping sound is heard *loudest* in the position of the pulsation before alluded to, and even the mid-sternum. It is heard less loudly in the corresponding portion of the left side. The sound has also a higher key on the right than on the left side, and is more tubular. Over the pulsation no natural second sound is heard; but occasionally to the left of it, and over the situation of the pulmonary artery, a slight murmur is heard in lieu of it. The single rasping murmur is not so loud in the carotid as in the position of the visible pulsation and mid-sternum, and there is a total absence of the second sound. At the apex of the heart there is heard feebly a second sound or murmur; but the first sound is completely superseded by the murmur. In the left axilla, just below the outer border of the pectoralis minor, the first sound is slightly heard preceding the loud rasping murmur, which is followed in its turn by a very faint second murmur. In the right axilla nothing but the single loud rasping murmur is heard.

Behind, no distinct tremor is to be felt. The right infra-scapular and right supra- and infra-spineous fossae are duller than the corresponding portions of the left side; but the rasping murmur is heard louder in the right than in the left interscapular region. On the right side it is heard most distinctly opposite the second and third dorsal vertebrae, for a space occupying one inch and a half square.

There is at present no cough or expecto-

ration; no palpitation at the heart; no pain whatever in the chest. Pulse 72; at the wrist locomotive; heaving, but weak; occasionally intermittent. Tongue clean, appetite good, no nausea. Bowels regular.

Urine sp. gr. 1025, acid, of a pale amber colour, slightly turbid; no excess or deficiency of phosphates, no albumen.

Supposed exciting cause.—He supposes the lifting up of the weight in the original instance brought on the attack.

Treatment.—July 16.—Tinct. Digitalis, Acid. Sulphurici dil. aa. ℥xv.; Aque Mentth., Aque, aa. ʒvi.—Fiat haust. ter die sumend.—Full diet.

18th.—Skin cool and moist. Does not feel stronger or weaker than he did. No headache or giddiness. Sleeps very well. There is no cough. The second murmur is heard more distinctly and frequently at the left of the mid-sternum. No cardiac pain or palpitation. The physical signs in other respects are unaltered.

19th.—The pulsation is still to be felt between the third and fourth ribs. The dulness on percussion over this part is more marked on strong than on gentle percussion. There is no pain or palpitation at the heart; no natural second sound heard over the tumor, but occasionally a second murmur between the third and fourth ribs of the left side. It is not heard at all in the carotids. No headache or giddiness. He walks about the ward without any inconvenience. Pulse 72, pretty full, regular. Appetite excellent. Bowels open.

21st.—Continues much the same. There is no cough or expectoration. Face looks rather red. He is perfectly free from pain; indeed, he states that, judging from his feelings, he should not know but that he was perfectly healthy.

23rd.—He was enabled to walk down stairs yesterday morning in the yard, and to-day, where he walked about for a quarter of an hour or so. He did not feel any palpitation at the heart, or other inconvenience, from the exertion.

24th.—To-day the chest was again measured:—Circumference of chest below nipples, 37½ inches; right half ditto, from spine to mid-sternum, 19 inches; left ditto, ditto, 18½ inches; distance between the two nipples, 8 inches; right half ditto, 4½ inches. The pulsation is still seen between the third and fourth ribs, and slightly in the epigastrium. An undulatory motion is also felt, extending between the sixth and seventh, fifth and sixth, ribs, beginning at the left border of the sternum, to a line drawn two inches external to the right nipple. In front, both sides are resonant below the clavicles. There

is very little marked dulness over the seat of the pulsating tumor, but the pitch is higher. It becomes, however, more marked on strong percussion. The tremor is felt over the same extent as before. Vocal vibrations equally strong on both sides. Opposite the space before indicated, between the third and fourth ribs on the right side, the single rasping sound is heard as loud as before; but the second murmur (in the place of the second sound) is heard more distinctly. In the left axilla the sounds are similar, only the rasping sound seems to be preceded by a slight murmur, and succeeded by another, which last is stronger than the former. In the right axilla there is also heard a very feeble first sound or murmur preceding the loud single rasping murmur, and which last is occasionally followed by a slight third murmur. No second sound is heard in the carotids. There is no regurgitation of the veins of the neck visible.

Behind, no tremor is felt. Both the right supra and infra spinous fossae are clearer than those on the left side. The rasping sound is heard, as before, loudest on the right side of the second and third dorsal vertebrae. In addition, however, there is occasionally heard, for two or three beats successively, another rasping sound equally loud with the first, loudest over the right interscapular fossa, between the first and second dorsal vertebrae. It is, however, not constant, sometimes not being heard at all for twenty or thirty beats. It is heard independently of respiration. The respiration is apparently healthy on both sides—perhaps feebler on the right side; but it could not be very well heard in front, owing to the loud bellows-murmur. He does not complain of any pain. The heart intermitted only once during the examination (three quarters of an hour). No palpitation even on exertion. Pulse 96, felt at the wrist synchronously with the single rasping sound. Bowels not open.

25th.—There is no anasarca, even in his extremities after long standing. No pain anywhere. Feels altogether much stronger. Last evening he again went down in the yard, and walked up and down for about an hour, and did not suffer any inconvenience from it. Expression of countenance natural. No headache. Sleeps well. No cough or palpitation. Pulse 100, perfectly soft, regular.

Discharged much relieved.

The urine was analysed twice for urea, and found to contain, on the 21st, 17·28 gr., and on the 24th, 18·73 in 1000 grains. There was an excess of phosphates only on the 19th.

State of Urine.

Date.	Reaction, &c.	Albumen.	Sp. gr.	Quantity passed in 24 hours. 3.	Microscopical Characters.	Quantity of solid matter excreted in 24 hours.
July 16	Acid.	None.	1025	—	Epithelium scales; hairs; oxalate of lime.	—
" 18	Do.	Do.	1025	40	—	1165 gr.
" 19	Very acid.	Do.	1032	22	—	812
" 21	Do.	Do.	1030	18	—	442
" 22	Acid.	Do.	1016	—	—	—
" 23	Do.	Do.	1023	32	Oxalate of lime.	858
" 24	Do.	Do.	1030	32	—	1185

REMARKS.—*Diagnosis*: It was obvious that the disease in this case was internal aneurism. There was a pulsation visible and to be felt in a position where in the normal state it is absent. The previous history:—He had felt something give way in his chest while engaged in lifting up a heavy weight. He had subsequently suffered pain at this part, which was increased by exertion. His former habits and occupation were such as to predispose him to such an affection.

(a.) A closer examination, however, served to point out its limits. The position of the pulsating tumor behind the fourth and between the third and fourth ribs; the non-extension upwards higher than the fourth ribs; the greater comparative dullness over the seat of the tumor on strong percussion; the greater loudness of the rasping sound behind, on the right side, over a spot exactly opposite where it pulsed anteriorly, seemed to indicate—First, that a portion of the aneurism was contained in the pericardium, though a portion also might extend beyond it; Secondly, that it was limited to the ascending part of the aorta.

(b.) But was the single rasping sound due to the aneurism, or was it valvular? It appeared to be independent of the aneurism: First, it was heard loudest between the third and fourth ribs and mid-sternum. Now, had it been in the artery, the sound would have been heard equally loud in the carotids, or at least the right carotid; and probably also in the right axillary artery, the artery transmitting with greater facility a sound generated within itself than one produced in the semilunar valves. Secondly, the intensity of the sound over the pulsating tumor was to be explained—first, by the presence of hypertrophy causing a more forcible propulsion upwards of the blood through the valve; and secondly, by the dilatation of the artery about the diseased valve tending to increase the loudness of the sound.

(c.) In relation to the variety of the

aneurism—Was it simple dilatation, or was it true aneurism? Looking over the history of the case, we find he originally felt something give way at the heart while lifting a heavy weight. This feature in the case is favourable to the latter supposition, the symptoms of a dilatation being more gradual—certainly not occurring suddenly. On the other hand, the sudden sensation alluded to might have resulted from rupture of the semilunar valve, and have had nothing to do with any disease in the arterial tube.

(d.) Was the aneurism large or small?—The evidence here afforded was not very conclusive either way. The dullness on percussion over the pulsating tumor was very inconsiderable, and so little marked as to have led Dr. Williams to remark, at the bedside, that he had scarcely ever seen a case in which it was less so. The difference in dullness was only apparent on strong percussion, and then chiefly by the higher pitch of the note elicited. 2. The rasping sound, though very loud, and such as we should expect to hear in a large aneurism, was, as we have before remarked, probably only valvular, not arterial. Still it must be admitted that, if covered by a portion of lung, these symptoms would, for the most part, not be incompatible with the presence of a large aneurism, more especially if that aneurism contained but few lamellated coagula within it.

II. There was disease of the semilunar valves of the aorta. The murmur was heard loudest at the base of the heart, also at the sternum, and in the carotids. There might be obstructive disease, and considerable, as evidenced by the grave harsh murmur elicited, and the extent of tremor felt. On the other hand, it might not be obstructive, simple enlargement of the ventricle, and dilatation above the valve, being sufficient to produce the sound, the blood being thrown upwards with force.

2. There was regurgitant disease of the aortic valve. An occasional murmur was

heard over the pulsation, and to the left border of it: heard loudest to the left, in the situation of the pulmonary artery. Yet was the sound evidently generated at the aortic valve; for it is to be remembered that, although in health the aortic valves are situated rather to the right border of the mid-sternum, so that if a needle were passed here it would go through their middle, as Dr. Hope has very correctly observed; still, where there is disease of the left ventricle, and the ventricle is much hypertrophied, the ventricle assumes a more anterior position, so that the aorta comes to be twisted, as it were, to the left side of the pulmonary artery, the vessels thus being reversed in position. Here, therefore, although it was heard loudest in the position of the pulmonary artery in health, it was nevertheless in the aortic valves. 2. No natural second sound was heard in the carotids. 3. The pulse was locomotive, occasionally irregular. 4. It was heard in the left axilla, probably owing to the diminished intensity of the single rasping sound at this distance. And finally, as the case progressed, this second murmur was heard very loud behind (24th).

III. There was hypertrophy of the left ventricle, indicated by the increased cardiac impulse. Moreover, the cardiac dullness was generally increased, extending from the fourth to the seventh rib. In enlargement from hypertrophy, as distinguished from enlargement from other causes, it chiefly extends downwards. Moreover, the right ventricle seemed to be somewhat hypertrophied also, as evinced by the occasional pulsation in the epigastrium.

Causes.—*Predisposing.* 1. The patient had been a free drinker up to four years back. Drunkenness, according to Mr. Guthrie, is one of the most powerful predisposing causes to aneurism, intoxicating liquors giving rise to a sub-inflammatory condition of the coats of the arterial vessels, leading to their gradual softening and disintegration.

2. He had sometimes been in want of proper nourishment: this, by debilitating generally his tissues, would predispose him to aneurism.

3. The nature of his occupation—often stooping, and lifting heavy weights. Such exertion would make him liable to disease of the vascular system, and more especially the arteries in the neighbourhood of the heart, on which the increased action of the heart is mostly expended.

4. The same result might be produced by the simple hypertrophy present. This is, however, doubtful, as the hypertrophy is only sufficient to overcome the valvular obstruction.

5. His sex. From a large number of cases of aneurism of all kinds, collected and analysed by Mr. Hodgson, it would appear aneurism is more commonly found in the male than in the female, in the proportion of 8 to 1. How far this disproportion is explained by reference to the habits and occupations of men being more violent and arduous than those of women, is doubtful.

Exciting cause.—The only apparent cause of this kind observed seems to have been the lifting up of the heavy weight, about twelve months back.

Treatment.—The indications in the treatment of all internal aneurisms may be included under two heads:—1st, to keep the motion of the heart within proper bounds, so as thus to remove one cause of its extension; 2dly, to reduce the quantity of blood without impoverishing its quality. To fulfil the first indication the patient should be kept perfectly quiet, avoid all fatigue, and such medicines given as tend to slacken the speed of the circulation. To fulfil the second indication, if there be plethora, depletion; but this remedy should be used with great caution, nor should the diet be kept too low, lest we should impoverish the blood, and thus prevent the formation of coagulated laminae in the aneurism, and injure generally the tone of the system; and also give such medicines as shall keep the functions regular, and promote viscosity in the blood. In this case blood-letting was unnecessary. The patient was ordered digitalis. There is perhaps no disease in which the beneficial effects of foxglove are more marked than in cardiac affections, retarding the velocity and reducing the force of the circulation: moreover, digitalis is a diuretic. Sulphuric acid was added, to promote the coagulation of the blood and the formation of lamellae. The diet was also nutritious. Under this treatment he gradually improved, so as to be able to take a considerable amount of exercise without the slightest inconvenience. There did not appear to be any disease of the kidney. The quantity of solid matter excreted in the twenty-four hours was always sufficient.

Prognosis.—Aneurism does not always terminate fatally, whether produced by rupture of the arterial coats or other cause. A spontaneous cure sometimes occurs, whether from the condensation of coagula, or by pressure of a portion of the aneurism against the artery, or by inflammation of the sac, and subsequently obliteration of the cavity. These two last results should not be looked upon as favourable if they occurred in the present case. The close position of the aneurism near the heart is here an unpleasant feature. Yet Dr. Wil-

liams is quite sure that aneurism of the aorta or neighbouring vessels may be cured under favourable conditions; and "if we are to believe the histories recorded by Pelletin, in his *Clinique de Chirurgie*, and by other authors, aneurisms of the aorta so large that they protruded through the absorbed ribs and sternum have been reduced and cured"—(Cooper's First Lines). Mr. Hodgson, in his *Treatise on Diseases of the Arteries*, mentions some cases of aortic aneurism, where the sac was of moderate size, and completely filled with fibrinous coagula, at the same time as the canal of the aorta was perfectly free. In this patient we have the secretions properly performed, and thus a probable absence of any disease in the secreting organs, through the inefficient action of which, excrementitious matters might be retained in the blood, and thus give rise to cardiac or arterial inflammation. Moreover, he is certainly a great deal better than he was. All these are favourable symptoms; and if he avoids all excesses and hard work, he may probably recover. On the other hand, the position of the aneurism is most unfavourable; and if from necessity or other cause he resumes his occupation, the fear is, the disease will progress, till, finally making its way externally, or bursting internally, it will prove fatal.

Correspondence.

MEDICAL ETHICS. RULES OF THE MANCHESTER MEDICO-ETHICAL ASSOCIATION. SHOULD A LICENSED PRACTITIONER MEET IN CONSULTATION A PERSON NOT QUALIFIED TO PRACTISE MEDICINE?

SIR,—We are instructed by the Committee of the Manchester Medico-Ethical Association to request that you will publish in the columns of the *MEDICAL GAZETTE* the accompanying correspondence between the Committee and Mr. Windsor, the Treasurer of the Association, relative to the retirement of that gentleman from its ranks.—We are, sir,

Your obedient servants,
J. AIKENHEAD,
W. C. WILLIAMSON, } Hon. Secs.

Manchester, May 28, 1850.

DEAR SIR,—The following statement has been made to us, as Hon. Secs., by a member of the Medico-Ethical Association, to be laid before the Committee at its meeting on Friday next, 31st inst. We shall, therefore, be obliged if you can attend the meeting; and if not convenient to do so, if you will inform us, before Friday, whether the

statement is substantially correct. It is to this effect:—"That on or about the 7th inst. Mr Windsor met in consultation Mr. Dean of Ancoats, an unqualified practitioner, on the case of Hugh Hughes, of Bridge Street, Butler Street, Ancoats, who was labouring under fever: that Mr. Windsor continued in attendance with the said Dean until the patient's death, May 17th: and that by this proceeding Mr. Windsor violated the 1st rule, Section 2, of the Bye-Laws of the Association.—See note A.*

We are, dear sir,

Your obedient servants,
J. AIKENHEAD,
W. C. WILLIAMSON, } Hon. Secs.

J. Windsor, Esq.

Manchester, May 28, 1850.

GENTLEMEN,—In reply to your note just received, I may state that I did recently attend with Mr. Dean a patient named Hughes. I had a short time previously been informed by Mr. Dean that he was preparing for qualifying himself, and ascertained, on the occasion of seeing Hughes with him, that he was purposing having his examination pretty immediately. Under such circumstances I did not decline attending on the above occasion, nor should I, probably, if similar ones recurred. If the rules of the Society are too stringent to permit this, I must request my name as a member to be withdrawn.

And am, gentlemen,

Respectfully yours,

JOHN WINDSOR.

To the Hon. Secs. of the Medico-Ethical Association.

Manchester, June 1, 1850.

The Committee of the Medico-Ethical Association beg to express to Mr. Windsor the very great regret with which they have received his communication of the 28th ult., and to add, that for weighty reasons they cannot at present accept his resignation. The Committee have additional pain in communicating to Mr. Windsor the enclosed statement, just forwarded to their Hon. Secs. by a member of the Association. The Committee is adjourned till Thursday, June 13th; and they earnestly request that Mr. Windsor will in the meantime supply them with the means of giving his name—

* Note A.—The Rules of the Association declare, that "No member shall, on any pretext, meet in consultation persons practising medicine who were not engaged in practice before the year 1815, or who do not possess a degree, diploma, or license, from any legally constituted corporate institution in the United Kingdom, or from any foreign university, requiring residence or examination to obtain its diploma."

Resolved unanimously, "That the report be received and entered on the minutes as perfectly satisfactory."

rous personal friends, and the profession generally, a satisfactory explanation of the circumstances therein referred to.

J. AIKENHEAD, } Hon. Secs.
W. C. WILLIAMSON, }
J. Windsor, Esq.

Statement—"That in the early part of last year Mr. Windsor met a Mr. Hughes (practising medicine in Rochdale Road without any qualification) in consultation on a child of Mrs. Walker, provision dealer, of Rochdale Road, and that they attended conjointly till the boy's death, five days after Mr. Windsor's first call: that in the autumn of last year Mr. Windsor was called in by Hughes to a Mrs. Hawkshaw, of the Spread Eagle Inn, Rochdale Road, whom they attended together till her death: that on the day of Mrs. Hawkshaw's funeral they attended together a Mrs. Lodge, of 188, Rochdale Road, their joint attendance continuing until the patient died."

Manchester, June 1, 1850.

GENTLEMEN,—I quite admit of having some time ago attended two or three cases with Mr. Hughes, or rather prescribed for the patients. I had formerly, on Mr. Harrison's account, whilst he was assistant to that gentleman, seen some few cases with him; and I did not see that there was more harm in affording my aid in one case than in the other, especially as he also assured me that he was actively preparing for qualification.

I am, gentlemen,

Yours respectfully,

JOHN WINDSOR.

To the Hon. Secs. of the Medico-Ethical Association.

Manchester, June 13, 1850.

The Committee of the Manchester Medico-Ethical Association have read with extreme pain the correspondence between their Secretaries and Mr. Windsor, in reference to the latter having recently met, and for some time past been in the habit of meeting, in consultation the two unqualified practitioners named in the correspondence. Upon a full consideration of the circumstances of the case, they feel bound to declare that Mr. Windsor has behaved towards the Association with the greatest dissingenuousness. Having been a party to the framing of the law which he has now so completely violated, and being fully aware (from the fact of having been previously charged with a similar offence—see note B)*

* Note B.—Extract from the Minutes of the Committee Meeting held April 21st, 1849. Report of deputation appointed to wait on Mr. Windsor to enquire whether he had met Mr. Dean of Ancoats in consultation, and whether he was aware that he possessed no professional

that it was the determination of the Committee to enforce the law, it was Mr. Windsor's duty to resign his connection with the body if he found it incompatible with his interests and sentiments. But for one who is a Fellow of the Royal College of Surgeons of England, senior surgeon to a hospital, and, moreover, one of the oldest practitioners in the town, to remain connected with, and to hold the important office of Treasurer to, a Society whose fundamental principles he is continually setting at naught, is a most gross instance of unprofessional conduct. The Committee also feel deeply the great injustice inflicted upon the younger members of the profession, who desire to exercise it in an honourable spirit, by a gentleman of Mr. Windsor's status countenancing, by co-operation with them, unscrupulous adventurers, who are at once breaking the law of the kingdom, and violating a great moral principle. The Committee, therefore, accept with satisfaction Mr. Windsor's resignation, as it spares them the performance of what would have been a most painful but imperative duty—namely, his expulsion from the Association.

J. AIKENHEAD, } Hon. Secs.
W. C. WILLIAMSON, }
J. Windsor, Esq.

Medical Intelligence.

FAILURE OF THE FIRE ANNIHILATOR.

In a former volume* we noticed the introduction of the so-called Fire Annihilator, —a mixture of charcoal and nitre, which it was proposed to burn, and then allow the resulting products of combustion to fall on the burning mass. We then said that it could never be substituted for a fire-engine in a house thoroughly ignited. A fair trial of the annihilator has been recently made near Woolwich. A two-story house, built for the occasion, was set on fire, and the annihilator assiduously applied under the

qualification whatever.—"On waiting on Mr. Windsor and submitting to him the first query, he answered in the affirmative, and stated that one evening, about ten o'clock, a cab was brought to his door, with a message requiring him to visit a patient who was very ill as speedily as possible. He did so, and on reaching the house he was told that another surgeon was already in attendance, but that they would send for him, which was done, and soon after Mr. Dean made his appearance. They met that once over the case, and no more. In reply to the second query, Mr. Windsor stated that he had not the slightest idea that Mr. Dean was not a duly qualified man: he was introduced to him as a surgeon, and he had no reason to doubt his correctness as a legitimate practitioner."

* MEDICAL GAZETTE, vol. xliii. p. 369.

superintendence of the inventor and the patentees. In spite of all their efforts, and the employment of their most powerful machines, the flames could not be "annihilated." The house was burnt to the ground. At the Royal Institution the results were much more successful; but then the houses experimented on were dolls' houses.

PAYMENT OF POOR-LAW MEDICAL OFFICERS
IN DORSETSHIRE.

MR. W. SWEETING, medical officer of the Dorchester Union, writes to us as follows:—

In the present year it is contemplated by the Dorchester Board to reduce our salaries by withholding the payment of these extras, to which we object, and the purpose of my letter is to put the question in its true light, that the public may judge between us.

I am not prepared to speak as to other districts, and therefore confine myself to that which I occupy, which consists of three parishes, the nearest of which is three miles from my residence, the most distant five. Now, for journeys, medicines, and external applications, I am paid SIX SHILLINGS AND FOUR PENCE THREE FARTHING WEEKLY, so that when the parliamentary grant is deducted, each parish contributes for the supply of their sick poor a fraction less than *thirteen pence a week*. And the Board desires a further reduction by cutting off any little advantage which *may* accrue from the payment of extra fees! adding the most wearisome as well as disagreeable branch of our occupations—pauper midwifery.

I am persuaded that the guardians are ignorant of their own affairs, and that when they read this statement will be mortified to think that the question has been for a moment entertained by them. Most of those gentlemen, I suspect, (and I *know* that the public generally) have no idea of the existence of the parliamentary grant, for if the board were cognisant of it, extended their hands to receive it, and refused the medical officers their extra fees, it might be characterised as an act of injustice. It has not, perhaps, occurred to the guardians that by reason of these very extras the unions are advantaged.

I have looked through my account for the past year, wherein it appears that my extra fees, exclusive of vaccination (which has been provided for by a separate Act of Parliament) have amounted only to *fourteen shillings*, and that the board have gained a clear profit by the parliamentary grant of £7. 11s. in my district alone, having received from the Poor-Law Board £8, and paid me, in the shape of an extra fee, 14s.

Is it likely that the Poor-Law Board, or that Parliament, will sanction this perversion of their intentions? I know not with whom this design of curtailing the pay of the medical officers originated, nor the motives which influenced them, but I am sure that the proposal will meet with the almost unanimous condemnation of the public, whilst this discussion will show the uncomplaining disposition of the medical practitioners, and eventually issue in their advantage.

CAUSE OF THE DIMINUTION OF HYDROPHOBIA IN THE METROPOLIS.

THE present rarity of hydrophobia is mainly to be attributed to the operation of the Act of Parliament, brought in by Mr. Fox Maule, whereby dogs are not now allowed to draw any vehicle in London. One of the reasons assigned for passing the above-mentioned judicious measure was, that the canine race, when employed in drawing vehicles, particularly in hot dry weather, often get so excited as to become rabid, and then to communicate the disease, not only to other dogs and animals, but also to man. Since the prohibition became law, hydrophobia has almost disappeared from London, or, at least, is a very rare disease; and this happy result is, I think, so much owing to Mr. Maule's exertions, that it would be desirable to make the measure general throughout the whole empire—for the malady prevails elsewhere more frequently than in the metropolis, to which alone (and sixteen miles around) the act now referred to applies.—*Dr. Webster on the Health of London.*

ROYAL COLLEGE OF SURGEONS.

GENTLEMEN admitted members on the 7th inst.:—E. Bowen—W. B. Dalby—H. F. Nelson—J. Smith—E. F. Andrews—R. Gregory—R. Burt—G. Moore—D. M'Keogh—C. G. Walfenden—S. W. Broadbent.

Admitted on the 14th inst.:—J. C. Williams—A. G. Power—E. J. Pring—W. Acton—T. J. Lyth—H. G. A. Wright—J. Bowmer—J. Parker—S. M. Webb—and G. F. Burder.

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, 6th June, 1850:—Francis Philip Cupiss, Diss, Norfolk—Charles William Morris, Cheltenham—Henry Forester, Bideford, Devon—Joseph Hutchinson Hammond, Bridlington Quay, Yorksh.—Joseph Briggs, Ashbourn, Derbyshire—Hugh George, Chepstow, Monmouth.

Admitted on the 13th June:—Charles

1086 BIRTHS AND DEATHS, METEOROLOGICAL SUMMARY, ETC.

Welch, Cambridge Road, Mile End—
Henry Edwin Sargent, Bottonet, Lizard,
Cornwall—James Weston Combs, London—
Robert Beales, Leicester—Nathaniel
Chap, Bristol.

FRACTURED NECK OF THE FEMUR, UNITED.

THE death from pneumonia of a man in
the surgical ward, aged 73, enabled us to
find the proof of complete union of the
neck of the femur, fractured partly within
and partly without the capsule. His age
was the point of interest.—*Dr. Hartsborne,*
in *Amer. Jour. of Med. Sciences*, 1850.

BOOKS & PERIODICALS RECEIVED

DURING THE LAST TWO WEEKS.

- A Practical Treatise on Diseases affecting
the Skin. By the late Anthony Todd
Thomson, M.D. F.L.S. &c. Completed
and edited by E. A. Parkes, M.D.
- The Nature and Cure of Consumption, In-
digestion, Scrofula, and Nervous Affec-
tions. By G. Calvert Holland, M.D.
- An Inquiry how far Consumption is cura-
ble, &c. By J. Turnbull, M.D. Second
Edition.
- Report on the Cholera in Boston, 1849.
Ship Fever. The Fiske Fund Prize Dis-
sertation for 1849. By H. G. Clark,
M.D.
- The Causes, Symptoms, and Treatment of
Eccentric Nervous Diseases. By W. J.
Anderson, F.R.C.S.
- Report by the General Board of Health on
the Supply of Water to the Metropolis.
- Physician and Patient. A Practical View
of the Duties, Relations, and Interests
of the Medical Profession, &c. By Wm.
Hooker, M.D.
- On the Prevention of Constipation. By
John C. Warren, M.D. U.S.
- Introductory Lecture to a Course of Mil-
itary Surgery. By Sir G. Ballingall,
M.D. F.R.S.E.
- On Hospitals. By the same.
- Some Remarks on the Contamination of
Water by the Poison of Lead, and its
Effects on the Human Body. By J. B.
Harrison, M.R.C.S.L.
- Report of the Trial of Professor J. W.
Webster, indicted for the Murder of
Dr. George Parkman. By Dr. J. W.
Stone. 8vo. pp. 314.
- On the Health of London during the Six
Months terminating March 30, 1850.
By Dr. Webster.
- The Accommodation of the Eye to Dis-
tances. By W. C. Wallace, M.D.
- The Unity of Nature. By C. B. Radcliffe,
M.B.
- Henke's Zeitschrift für die Staatsarznei-
kunde. 2 V. H. 1850.

Casper's Wochenchrift f. d. g. Heilkunde.
Nos. 18, 19, 23: 4 to 11 May.
Comptes Rendus. No. 22, 27 Mai.
Journal de Chimie Médicale. Juin 1850:
The New York Journal of Medicine and
the Collateral Sciences. May 1850.

BIRTHS & DEATHS IN THE METROPOLIS.

During the Week ending Saturday, June 15.

BIRTHS.		DEATHS.	
Males....	698	Males....	405
Females..	572	Females..	365
	1269		800

CAUSES OF DEATH.

ALL CAUSES	800
SPECIFIED CAUSES	798
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	167
Morbid Diseases, viz.—	
1. Dropsy, Cancer, &c.	36
2. Brain, Spinal Marrow, Nerves, and Senses	94
4. Heart and Bloodvessels	32
5. Lungs and organs of Respiration ..	29
6. Stomach, Liver, &c.	56
7. Diseases of the Kidneys, &c.	11
8. Childbirth, Diseases of Uterus, &c.	15
9. Rheumatism, Diseases of Bones, Joints, &c.	5
10. Skin	1
11. Old Age	35
12. Sudden Deaths	18
13. Violence, Privation, Cold, &c. ...	39

The following is a selection of the numbers of
Deaths from the most important special causes:

Small-pox	9	Convulsions	24
Menses	26	Bronchitis	22
Scarlatina	19	Pneumonia	20
Hooping-cough	30	Phthisis	129
Dysentery	17	Lungs	6
Cholera	1	Tooth-ache	11
Typhus	43	Stomach	4
Dropsy	15	Liver	7
Hydrocephalus	13	Childbirth	4
Apoplexy	13	Uterus	6
Paralysis	13		

REMARKS.—The total number of deaths was
51 below the average mortality of the twenty-
fourth week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer 29.7

Thermometer 59°

Self-registering do. Max. 112° Min. 50°

• From 12 observations daily. • Sun.

Rain, in inches, 0.10.—Sum of the daily obser-
vations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of
the week was 7° below the mean of the month.

NOTICES TO CORRESPONDENTS.

Mr. E. Wailen.—We had already come to the
resolution of not publishing the printed cir-
cular.

Dr. J. C. Warren's communication has been
received.

Mr. Bulman's paper shall be inserted with as
little delay as possible.

Dr. Watson's letter with inclosure has come to
hand. It shall have our early attention.

Owing to want of space, several communications,
which are in type, have been postponed until
next week.

RECEIVED.—Dr. C. Cotton.

Lectures.

LECTURES
ON THE
TREATMENT OF DELIRIUM AND
COMA;

(IN SEQUEL TO THE LUTHELIAN LECTURES
FOR 1866;)

Delivered at King's College Hospital,

By R. B. TODD, M.D., F.R.S.

(Reported by Mr. LIONEL S. BEALE, Med. Associate K.C.L.)

LECTURE III.

Recapitulation—Cautions respecting the use of chloroform—Treatment of delirium tremens when the patient refuses food—Use of the stomach-pump—Chloroform—Bleeding in delirium tremens—Opinion of Esquirol and of Sutton—Mercurial Treatment—Dr. Gerhardt's treatment by stimulants only—Treatment of the cases tending to coma—Prognosis in delirium tremens—Treatment of the delirium e potu—Of the traumatic delirium—Of the delirium of pneumonia—Cases—Mode of treatment.

GENTLEMEN,—When we last met I discussed at some length the treatment of delirium tremens, having, as you will recollect, drawn a distinction between the true delirium tremens of drunkards and the delirium e potu which may immediately follow a debauch in a habitually temperate man. And I considered the treatment of the true delirium tremens under two forms—namely, the milder kind, and that of a more highly developed character; and I laid down the proper treatment for the latter when the disturbance of the balance of nutrition was caused by privation of food from want or depraved appetite, and when caused by a highly irritable state of stomach, which rejects all food immediately it is taken. I endeavoured to point out that the most important points which should engage the attention of the practitioner were the restoration of the balance of nutrition, and the employment of mild and careful means of restraint, in order to prevent the patient from injuring himself or others; and lastly, the adoption of means to procure sleep: and stated that, on the whole, nothing was so useful in the vast majority of cases as opium, in some shape or other. In severe cases, however, where opium had failed, and you may think it

unsafe to push it further, I mentioned that you would find a valuable resource in the inhalation of chloroform; and I described three cases in which that practice had proved eminently successful.

I must now take this opportunity of impressing upon you certain cautions which it is very necessary to observe with reference to the use of chloroform. These are—

1. That during its administration you must always keep your patient in the horizontal posture.

2. That, whilst the patient is inhaling, you should watch carefully the state of the pulse; and, if you should observe any marked alteration of an unfavourable kind in its strength or frequency, you should instantly desist from administering it.

3. That you should always examine the heart previously to the inhalation; and, if there be any decided disease of that organ, you should not administer it at all. Chloroform is a very depressing agent, and it should therefore not be used without great carefulness on the part of the practitioner.

I may also add, that it is important, when possible, not to administer chloroform to a patient shortly after he has taken food, as under such circumstances the chloroform is very apt to excite an emetic effect, which would greatly embarrass the practitioner in his course of treatment.

There is a symptom, which patients affected with delirium tremens sometimes exhibit, much more difficult to combat than sleeplessness—namely, the obstinate refusal to take food. This is a most unfavourable symptom; and when it is present in a very marked manner, the prospect, both for the patient and practitioner, is most gloomy, because that first and most important indication in the treatment of the case—namely, the restoration of the balance of nutrition, cannot be fairly fulfilled.

In such a case we must devise some means of conveying nourishment into the system, either by persuasion or by force. One good plan is to give enemata of some highly nutritious broth, such as strong beef-tea. I frequently order a quarter, or half, or even a pint, of strong beef-tea, with ten or fifteen grains of quinine, regulating the quantity of the liquid by the probable facility with which the patient would retain the enema. Food may also be administered by the stomach-pump and œsophagus tube. For both these methods of giving nourishment force must be employed: less force will be required for the former than the latter, and therefore it is well to give a trial to the enema plan first. It will not do alone for any length of time, and therefore you will be obliged to have recourse to the œsophagus tube. The other

jection to the use of the stomach-pump and the œsophagus tube is, that in some cases great resistance is offered by the patient, and his struggles are apt to cause great exhaustion: and more than once I have seen unfavourable results follow this treatment; but in many cases you have no alternative.

In a few cases of this kind I have made the patient inhale chloroform, and, while he was under its influence, given food by introducing a spoon carefully into the mouth to the back of the throat, so as to excite the muscles of deglutition. The food conveyed to the back of the pharynx, within the grasp of the posterior pillars of the palate, produces reflex action of the constrictors, and is immediately swallowed. You must be careful, in giving food in this way, not to give a large quantity at once, as you thereby run the risk of making the patient sick.

An important question, as regards the general treatment of delirium tremens, is as to the propriety of bleeding. Is it necessary or desirable to bleed, either generally or locally, in such cases? Upon this point practical men are pretty well agreed, that bleeding is a bad and highly dangerous practice; and both reason and experience combine in support of this opinion. For in this delirium there is a marked tendency to the deterioration of the blood by increase of its water and a diminution of its colouring matter: and we know that under a bleeding system this tendency becomes augmented, and so the disturbed nutrition of the brain increased and perpetuated. Moreover, there is nothing in the pathology of the disease which would warrant us in blood-letting; for we have it ascertained on the most incontestable evidence that there is no inflammation or congestion to combat by such means. Again, experience shows that bleeding is followed by unsatisfactory results. If you bleed in violent delirium, you generally add fuel to the fire, and you increase the violence of the delirium; unless, indeed, you take away so much blood as to produce extreme prostration, which destroys the force of the patient, and from which he is not likely to rally.

Upon this point, I will read you a passage from Esquirol, one of the best and most practical writers on insanity, and whose opinions were founded upon a most extensive experience and observation.

Speaking of the state of fury, or of furious delirium, Esquirol makes the following remark. "The furious," he says, "have been bled without its being perceived that the loss of blood only increased the evil—and that it calmed the patients only when it deprived them of the power of re-

action necessary for the resolution of the malady."

This, then, is the opinion of the experienced and judicious Esquirol, as to the value of bleeding in cases of furious delirium. How many are the cases of delirium tremens which are very much of this kind! To this I may add, that Sutton, one of the earliest and best writers on this disease, who had unusual opportunities of witnessing it among the smugglers in Kent, gives express cautions against the practice of depletion by bleeding, founded upon his own experience and observation of the dangerous consequences which follow it.

You will ask me, if there are any circumstances likely to occur in delirium tremens which might justify our having recourse to bleeding, either general or local? To this I must answer, that I know of no combination of circumstances in a case of true delirium tremens which would induce me to recommend general bleeding with a confident expectation of benefit to the patient; but when there is a constant fixed pain in one part of the head, and that of a severe character, which does not yield under the ordinary treatment, you will then be justified in local bleeding, by cupping, or by applying leeches, but under such circumstances, you will obtain generally more decided and more lasting benefit by the application of blisters, or by establishing counter-irritation by some other means.

We may inquire further, are there any special grounds which favour the adoption of the mercurial plan of treatment in this form of delirium? Are we, as many do, to combine calomel with our opium, and to push it to ptyalism? To this I answer, that there is nothing in the pathology of the disease to call for this plan of treatment; that I have treated many cases with the most perfect success, without one grain of calomel; and that if you give mercury to cause salivation, you will only thereby delay your patient's period of convalescence, without, in the least degree, diminishing his chance of a second attack; on the contrary, you will rather increase his tendency to a relapse, by weakening his powers of nutrition. Indeed, I know of no good reason for the use of calomel in this disease, excepting in combination with purgatives, in cases where we have reason to think that the liver is sluggish in its action.

In fine, in the treatment of the ordinary cases of delirium tremens which you will meet with in practice, I cannot too strongly impress it upon you, that the most important point is to uphold the strength of the patient, in which, unless you can succeed, all your other remedies will prove

useless. In confirmation of this, I may here mention, that Dr. Gerrardt, of Philadelphia, as I learn from Dr. Wood's excellent book on the Practice of Physic, pursues with great success a purely stimulating plan of treatment in delirium tremens, to which alone he trusts; he gives, in all cases, an ounce to two ounces of brandy, every two, three, or four hours, according to circumstances; and by following this plan he has reduced the mortality from this disease in the large hospital at Philadelphia, from one in eight, to one in thirty-nine. This is a very important statistical fact in reference to the treatment of delirium tremens, and affords valuable support to the advice I have given you. I am not, however, prepared to trust to this treatment alone, nor to give up the use of opium and of other remedies.

In some cases of delirium tremens there is a decided tendency to a comatose state, which you must be prepared to deal with. In such cases, the rule to uphold the powers of the patient as much as possible applies equally with the others; but it is plain that you will have to give up the use of opium and all other sedatives, as tending to increase the coma. It is in the cases in which there is this tendency to coma that we are called upon particularly to inquire into the state of the secretions, especially into that of the urine: in many such cases albumen will be found in the urine, indicating that the tendency to coma depends on the non-elimination of the urea and other elements of the urine, in consequence of an unhealthy state of the kidney. Under such circumstances you will find it beneficial to apply blisters either to the back of the neck, or to the head, and to keep the blistered surface discharging, in order to promote the elimination of the poison; at the same time, and with the same object, we should promote the action of the skin and bowels as much as the strength of the patient will permit.

Prognosis.—Before I leave the subject of delirium, I must say a few words as to prognosis. The friends of patients always expect, and most reasonably, that you should be able to speak to them pretty confidently about the probable issue of a case, and will be sure to ask for your opinion on this subject. But independently of this, for your own satisfaction in carrying out the treatment, it is important that you should have some guide to enable you to form a correct judgment as to whether the symptoms point to a favourable or unfavourable issue. The more exhausted the patient is, and the greater is the tendency to coma, the more unfavourable will your prognosis be; the greater the number of previous attacks, the less likely is the termination

of the disease to be favourable. A first, second, or third attack is rarely fatal; all after the third are more likely to terminate in death. The state of the pulse, too, is an important guide: a very quick, running pulse, more especially if it be small and feeble, with weak sounds of heart, constitutes a most unfavourable sign; and this is particularly so, if the frequency of the pulse is not at all reduced by nourishment and stimulants. On the other hand, a pulse of moderate quickness, between 90 and 100, and regular, may be taken as a most favourable omen. Another point which will guide you in the prognosis is the readiness with which sleep comes on; if it comes on quickly, and in obedience to a small quantity of opium, nothing can be more favourable; but if the patient resists the opiate influence, the case is less promising. You should likewise notice the amount and violence of the delirium. It is better to meet with a case of violent delirium, which is readily controlled by treatment, than with a case in which the delirium, although not violent, is chronic, and seems not to yield to remedies. The very furious cases, if protected from injury, and well supported with food and stimulants, generally do very well; on the other hand, if the patient continues wakeful, fidgetty, talkative, although not violent, your prognosis will be less favourable. The absence of organic disease of the liver, kidneys, or membranes of the brain, must be regarded as a favourable point; and, of course, the presence of such disease would justify an opposite conclusion.

Delirium e potu.—Let me now speak of the treatment of cases suffering from the *delirium e potu*, a state which, we have seen, is in many respects essentially different from that of the true delirium tremens. A patient is brought into the hospital in a state of violent delirium, talkative, perhaps singing or hollowing, and requiring considerable restraint to hold him down; and we find, on inquiry, that he has been drinking, and we have evidence of that in the odour of alcohol from his breath. The long continuance of this state leads to coma. Now in these cases, which are examples of direct poisoning by alcohol, the great object of the treatment is to promote the elimination of the poison without unduly depressing the vital powers. This may best be done by emetics, purgatives, and sudorifics. You would give emetics, if you had reason to believe that there was alcohol still in the stomach, or indigested food. Nauseating doses of tartar emetic are useful in reducing the force of the heart's action, and in promoting free diaphoresis. It must be in cases of this kind, and not in those of true delirium tremens, that croton oil has been, as

I have heard, used with great success by some practitioners in the country; I have no experience of it myself. It may be that such a practice would tell well in the milder cases.

A sudden splash upon the head and face and chest with a large quantity of cold water often exercises a decidedly sedative influence; but if this fails, you need not have the same difficulty about using mechanical restraint in this as in the cases of true delirium tremens; and then you will find it useful to keep cold well applied to the head.

In these cases local bleeding may be sometimes practised with advantage; but it should always be tried with caution, and you should bear in mind that the poison of alcohol is apt, when given largely and quickly, to leave behind it a state of depression, which bleeding is apt to increase. In many of these cases there is a highly irritable state of stomach, due to a state of mucous membrane which is probably inflammatory, and brought on by the direct influence of the alcohol. When this is the case, of course you will not give such remedies as tartar emetic, but you will direct your treatment to the irritable state of the stomach. Counter-irritation by mustard to the epigastrium; ice or iced water in small and frequently repeated quantities; cold drinks; prussic acid,—will very generally succeed. If these means fail, then try leeching the epigastrium, morphia and creosote, effervescing draughts with potash, soda, or ammonia; and it is very important to keep up a free action of the bowels, which may best be done by small and often-repeated doses of sulphate of magnesia, dissolved in water, which of themselves tend to relieve the irritable state of the stomach.

In cases where the true delirium tremens is complicated with the delirium a potu coming on after a debauch, we must endeavour to restore the balance of nutrition in order to cure the delirium tremens, and also apply the proper remedies to relieve the delirium a potu; we must, in fact, combine, as far as possible, the two forms of treatment.

Treatment of traumatic delirium.—Closely allied to delirium tremens is the traumatic delirium, that kind of delirium which comes on soon after an injury, perhaps within a day or two after an operation or severe accident. As physicians we do not often see this disease, but you may, now and then, have opportunities (less frequently, however, I think, now than formerly), of observing it in the surgical wards after accidents or operations. A patient suffers a compound fracture of his humerus or femur, and is brought to the hospital, where the limb is set *secundum artem*: the patient seems com-

fortable, and every thing goes on quite favourably; but in the night he becomes delirious and violent, tearing off his splints and bandages and jumping out of bed, careless of his broken limb, and exhibiting a complete insensibility to pain, probably in consequence of his mind being fully occupied with the subject of his delusions. This state of delirium is most to be feared in persons of intemperate habits; but it may come on in the most temperate. The shock of the accident alone is sufficient, even in a temperate man, much more in one whose blood is poisoned by alcohol, to disturb the balance of nutrition, so as to derange the healthy action of the brain.

This condition was first described by the celebrated Dupuytren, and he pointed out the great power which opium, given so as to procure sleep, exercises over the delirium. During the treatment care must be taken to uphold the strength and to administer nourishing food and stimulants; and this precaution will be the more necessary when the habits of the patient have been intemperate. Perhaps the chief reason why this delirium is less frequently met with now than formerly, is because surgeons are more alive to the importance of upholding the strength of their patients, and also because they have given up the absurd system of a previous antiphlogistic treatment preparatory to severe operations. I remember when bleeding and purging were regularly practised as a matter of course, to prepare patients for the ordeal of an operation and its after process—a practice which has about as much to recommend it, as the habit which many country folks still have of being bled at the spring and fall of the year. If you see any tendency towards this state in a patient whom you may be attending after a severe injury, you may give opium to ward off the attack, as a prophylactic, and you will thus succeed in saving your patient from a dangerous illness, and yourself from a very troublesome case; and in your management of severe injuries you should keep in mind the liability to this form of delirium; if the delirium comes on in a patient soon after a severe injury or operation, you must trust to opium and support to restore him to a quiet mind. The opium may be given by the mouth or by the rectum as a suppository, or by enema. Dupuytren affirmed that this last mode of giving opium was the most efficacious, and he explained its greater efficacy in this way,—that when opium is placed in the rectum it is directly absorbed, while if swallowed it is subjected to the influence of the juices of the stomach, by which its activity is impaired. This explanation, however, will not hold; for whether the opium is introduced into the stomach, or

into the rectum, its absorption is similarly effected—namely, by the bloodvessels. It requires no special digestion previous to absorption; it is simply dissolved, and so absorbed. In the rectum it is likewise dissolved and absorbed. When administered by the mouth, it may interfere with the digestive power of the stomach upon the food, and so disagree with the patient; but when introduced into the rectum this is not likely to occur.

Is there anything to justify antiphlogistic treatment in these cases of traumatic delirium? I should say, certainly not.

Delirium in Pneumonia.—From the consideration of traumatic delirium we naturally proceed to that form of delirium which accompanies internal inflammations: and I shall only have time to-day to speak of the delirium which frequently arises in the course of an attack of pneumonia. A patient is admitted into the hospital with all the physical signs of pneumonia: he goes on very well for two or three days, then becomes restless and wakeful, appears astray when spoken to, answers incoherently, and perhaps jumps out of bed and attempts to walk as far as his strength will permit him: this is a highly developed state of such delirium.

Are we to infer from these symptoms that there is inflammation of the brain, and treat the patient accordingly? We know from clinical examination that we must not. The delirium arises from cerebral exhaustion consequent upon the pneumonic state. The delirium is not necessarily in proportion to the extent of the pneumonia, but is directly proportionate to the *debility* of the patient. A small amount of pneumonia may exhaust one man; while another, with the same or a greater amount of disease, may be but little affected. A man, who was admitted into this hospital about six months ago, and whom many of you may recollect as having died of pneumo-thorax, came to my house one morning complaining of shortness of breath, which he had been suffering from for several days. I sent him to the hospital, where I soon after examined him, and found half of one lung hepatized. This patient had been able to continue his occupation, and it was with great difficulty he could be persuaded to remain in the hospital. Another man would have been completely prostrated with even a less amount of disease, and might have been delirious.

We have had two cases of delirium coming on in pneumonia lately in the house, to which I may refer you to illustrate the treatment of the disease. The first was that of a lad named Heeley, 18 years of age, in Rose ward, in whom the pneumonia was of the low and typhoid

kind, but limited to the lower part of one lung. There was great dulness below the angle of the scapula, with bronchial breathing and bronchophony, and he expectorated rusty-coloured sputa. He was admitted on the 31st of May, when he was ordered beef-tea, wine, chloric ether, and liq. ammon. acetat.: the pulse was 100, and the respiration 40.

On the 22nd he began to be delirious, tried to get out of bed, and was unable to answer questions properly: his wine was increased from four to twelve ounces. The delirium continued throughout the 23rd; the pulse was 96, and the respiration 46: he had passed a restless night. Half an ounce of brandy every hour, and four grains of quinine every three hours, were ordered. On the 24th the report says that he slept well, that the delirium had ceased, and that the pulse had fallen in frequency. The pneumonia had not extended, but, on the contrary, it was beginning to be resolved, and returning expectoration had commenced. On the 25th he was better: pulse 80; respiration 31; and on the 31st he was convalescent, and took meat. The next day the respiration was found to be quite natural, so that in the course of seven days, by the stimulating treatment, this patient was brought from a state of high delirium to convalescence, and the lung from a state of complete hepatization to perfect resolution.

The second case is that of a woman named Darwin, æt. 27, in the Lonsdale ward at present, both of whose lungs are affected with inflammation; and there is some reason to believe that pleurisy is also present. In this case, although there was extreme prostration, and both lungs were inflamed and hepatized, and there has been much less delirium than in the case of the lad Heeley, in whom only one lung was inflamed, and that only in part. I attribute this to the fact that she was put upon stimulants immediately on her admission, and the delirium was never allowed to make progress. In the case of Heeley the delirium gave way to the treatment, while in the woman's case it was prevented by the treatment from arising.

The development of delirium is a sign that the powers of the patient are failing under severe disease, or under the treatment employed for its cure. If, then, you are combating the inflammation with active antiphlogistic and depressing remedies, you must modify or change your treatment, and give nutritious food and stimulants.

Now, I may here remark that some aid is required in the administration of food and of stimulants; and it is to the neglect of proper management in the mode of their administration that I attribute the failure of

this treatment in some hands. You must take care to give your food and stimulants in such a way as will be most likely to secure their easy and quick digestion: it is when they are not properly digested that they disagree and occasion increase of fever; but when fully and quickly digested they cause no derangement of the system. Now the best mode of giving food and stimulants in order to ensure their easy digestion, is to give them in small quantities at a time; and by the frequent repetition of these small doses a large quantity may be given in the day, with very little effort on the part of the digestive organs. If, for instance, you determine to give six ounces of brandy in the day, and a pint of beef tea, you should divide these quantities, so as to give a small portion every half hour, or every hour, or every two hours, and with the utmost regularity, according to the urgency of the case. In cases of debility it is very important that the patient should be supplied with support very frequently, and not be allowed to remain any length of time without it. Hence you should order from two drachms to half an ounce or more of brandy, or other stimulant to be given every half hour, or hour, according to circumstances.

The best indications that such a mode of treatment agrees well with your patient are derived from the state of his digestive organs. If he have a moist or clean tongue, and is free from flatulence, and the stomach or bowels are not distended, and if at the same time the pulse does not increase in frequency, then you may infer that the food and stimulants are duly digested and assimilated. But if the tongue be foul or dry, and show no tendency to clean; if there be flatulence or sickness, and the fever and the rate of the pulse are increased, then there is something wrong in the quantity or quality of the food and stimulants, and it behoves you to find this out and correct it.

As a general rule it is not desirable to give opium in delirium with pneumonia, because it has a tendency to increase the congestion of the lungs. However, there are other sedatives which may be given without this danger, such as camphor, hop, henbane. Quinine is often very useful in this form of delirium; and it appears to me to be especially indicated where there is profuse sweating. In such cases I have seen the most striking benefit follow the administration of two or three grains of quinine three or four times a day, with or without acid.

There is one other remark I wish to make, bearing upon the delirium of pneumonia. It is that in the early treatment of the pneumonia, we should act with the

same caution and circumspection as we should use in the treatment of a patient who had suffered a severe injury. You must bear in mind that your patient may yet suffer from delirium, and guard against it by not being too actively antiphlogistic at first, and by taking care to allow a sufficiency of nutriment. Remember, that as a patient with compound fracture has to undergo an extensive process of reparation, so also has the patient with a hepatised lung to pass through a process of repair which must draw to a certain extent upon the vital powers.

Original Communications.

CASE OF

RAPID DEATH FROM SULPHURIC ACID BY SUFFOCATION;

ITS CHEMICAL ACTION ON THE FAUCES AND PARTS ADJACENT.

By W. W. GULL, M.D.
Guy's Hospital.

If you think that the details of the following case are worthy of being recorded, you will oblige me by giving them a place in the GAZETTE.

I was invited a few days ago, by my friend Mr. Parker, of Duke Street, to be present at the post-mortem examination of a female who had destroyed herself by attempting to swallow some strong sulphuric acid. The examination took place on the sixth day after death.

Mr. Parker informs me, that, about eleven o'clock in the evening of the 23d May, he was summoned to the Railway Tavern, London Bridge, by the landlord, who stated that at his house a lady had just been discovered in her bed-room, either in a fit, or dead. She was seated on a chair by the bed-side in a half-recumbent posture, the head fallen backwards, so as to rest with its vertex on the bed, and slightly inclining to the right shoulder. The mouth was filled with tenacious frothy mucus; the lips, teeth, and gums were bleached, and the face was much disfigured by the acid. Death had occurred some time, as the extremities were cold and stiffened. In the right hand, which was lying across the body, was a small phial, labelled "Sulphuric acid—Poison."

There was about half a drachm still remaining in the bottle. The acid had run over the face, and down the back and shoulders; it was also sprinkled on the bed-curtains, and on the curtains of the window which was to the right side of the body, about two or three yards off.

The perfectly easy attitude in which the body rested was very remarkable; there could have been no struggling, or it would have fallen upon the floor. Mr. Parker therefore concluded that death had taken place from suffocation, immediately upon the attempt to swallow the acid.

Post-mortem.—The face was bloated, and marked with numerous charred lines, leaving islets of healthy skin, so as to give the face the appearance of having been tattooed. The tongue was greatly contracted. The epiglottis was so much eroded as to form but a small triangular process, jagged at the edges, and reduced to about one-third its size. The chordæ vocales were much dissolved, particularly that of the right side. The mucous membrane of the trachea was dissolved, and the cartilaginous rings dissected out very perfectly. The acid had passed into both lungs, charring them; it had escaped through the left into the cavity of the pleura, dissolved the pleura costalis and the subjacent ribs, and formed a crust of sulphate of lime upon the lung. The arch of the aorta, the superior cava, and the braehio-cephalic veins, were full of solid charred blood, having the appearance of dried blacking. On opening the stomach and œsophagus, it was evident that no acid had passed down in this direction. The epithelium of the mucous membrane of the œsophagus was entire, and the stomach contained only mucus.

The time which elapsed from the death to the post-mortem examination will probably account for the extensive action of the acid, which would of necessity gravitate in those directions. The case serves, however, to establish the suddenness of death, and the fact that sulphuric acid will cause death although no portion of it may reach the stomach.

Guy's Hospital, June 13, 1850.

BRIEF NOTES ON THE DISEASE, INDIAN VILLAGE CHOLERA,

AND ITS TREATMENT.

By ASSISTANT-SURGEON MOORE, B.A.

[Continued from page 1074.]

PART IV.

CASE XIX. — Under circumstances equally unfavourable, Newul, a prisoner in the jail at Lullutpoor, was carried to the hospital, suffering from the effects of cholera. He remained under treatment for 32 hours. In the course of treatment, three grains of lunar caustic were given in separate doses of one grain each, and at stated intervals of time.

In twelve hours after death the gastrointestinal canal was slit open. With the exception of a few dark circular superficial stains, and a few patches of dusky whiteness, the internal surface of the stomach presented a sheet of vermillion redness, of greater depth of colour on the posterior wall, and at the pylorus, than towards the œsophageal end. The intensest degree of vascularity occupied a space two inches within the stomach, close to the pylorus, and three inches beyond the pyloric orifice, in the first division of the duodenum.

The injection of the capillaries with dark stagnated blood, corresponding to this space, imparted a purplish colour to the mucous membrane and subjacent tissues. The exudation of gelatinous mucus formed a coating over the surface, and the infiltration of serous fluid between the strata of tissues gave a glossy, tumefied, and velvety appearance to the mucous membrane. This contrasted strongly with the dusky white and slightly puckered surface of the mucous membrane close to the caustic stains.

In the second and third divisions of the duodenum, the intumescence of the mucous membrane was strongly marked. The glandular bodies were swollen, and formed central points of vascularity, towards which the minute branches of injected blood-vessels converged. A faded rose-coloured tint ran through the mucous membrane in this intestine, as well as in the jejunum. A thick gruel-like secretion of serum, mucus, and lymph, intimately blended together, filled the gut.

The internal surface of the jejunum was coated over with a layer of gelatinous mucus. In several places the contact of the caustic was denoted by black dotted lines, and by stripes of dusky whiteness. In the localities where these marks were present, the inflammatory redness had disappeared; the injected condition of the capillaries was absent, and the distension of the glandular bodies was scarcely observable under the puckered and wrinkled surface of the mucous membrane. In the ileum there were no traces of the caustic. The surface of this gut was covered with inspissated gluey mucus, detached with difficulty from the mucous membrane. The epithelium was flossy. The subjacent tissues of the intestine were dyed of a deeper red than in the upper part of the tube. In the colon and rectum there were extensive patches of vascularity. The ilio-caecal valves participated in the crimson redness of the lower division of the small intestine.

The liver was free from engorgement, and in appearance was healthy. The gall-bladder was distended with tarlike bile. There was some enlargement of the spleen, of chronic duration. The kidneys were healthy. The bladder was empty. The inferior lobes of the lungs were gorged with fluid black blood, and had lost their crepitating feel. The superior lobes were in a more healthy state. The cavities of the heart were distended with blood, uncoagulated, black, and tarlike. The large venous trunks in the abdomen and thorax in like manner were distended with fluid blood.

Lunar caustic, and the other remedial measures adopted, failed in saving life. Had those patients survived, lunar caustic might deservedly rank as a preparation the most valuable yet tried in the treatment of cholera. Cupping failed, in consequence of the blood having retroceded from the surface, and in consequence of its tendency to stagnate and become extravasated in the parenchymatous tissues of the internal viscera. Confidence, however, ought not to be shaken in the virtues of the one, nor in the value of the other, inasmuch as the results would have been otherwise had the patients been seen at an earlier period of the cholera.

The use of calomel and opium.—Of all medicines that have been prescribed in the treatment of cholera, calomel has

had the longest, the most extensive, and the fairest trial. Next to calomel, opium takes its place.

In the earliest development of the symptoms in cholera calomel has been prescribed with an unsparing hand, by itself or combined with opium. Thus each medicine has been subjected to the fairest test, to ascertain its value as a remedial agent in this particular form of disease. The tide of public opinion has set in against the use of calomel in cholera. It would be unjust to say that calomel and opium, administered separately or combined, have not been instrumental in saving life in instances without number. There is scarcely a member of the profession who will not readily bear testimony to their having done so within the range of his practice.

Confidence in the much-lauded value of calomel and opium, as well as in the specific virtues of every other description of medicine, has been shaken, in consequence of the rates of mortality being disproportionately great, compared with the number of cases under treatment resulting in recovery. So long as the rates of mortality from the effects of cholera average between 40, 50, and as high even as 60 per cent., we cannot expect that confidence on the part of the public, or confidence on the part of men in the profession possessed of common sense, should be reposed in medicines from which such unsatisfactory results ensue. That plan of treatment must command confidence to the exclusion of every other by which a reduction can be effected in the rates of mortality from 60 to 30, from 50 to 25, and from 40 to 20 per cent.

Calomel has failed in the first of the essential virtues of a specific. Calomel and opium have failed in invariably subduing cholera at the onset, and in arresting its progress, when administered in the second stage. Could quantity have added to its value, I have prescribed scruple after scruple of calomel by itself, or combined with one and two-grain doses of opium. I have seen one and both prescribed by others, in more heroic doses than I have ventured to give, until the patients had swallowed as much calomel as would have salivated, under ordinary circumstances, a troop of dragoons; and as much opium, in powder and tincture, as would have stupefied a company of infantry; yet

the patients neither slept; nor did they ever exhibit the slightest approach to salivation.

The reason is obvious. In the type of disease to which alone the term "cholera" should be applied, the internal surface of the stomach is coated over with a layer of tenacious, glutinous, or gelatinous mucus, blended with lymph, semitransparent, and of the consistence of a thick solution of isinglass; and, at the same time, the functions of the absorbents are suspended. Therefore, these medicines will not act, and cannot act. So long as the duodenum, jejunum, and ileum intestines, are distended with secretions of serum, of mucus, lymph, and the saline ingredients of the blood, blended together, and forming the characteristic cholera puddle,—so long as the surface of the small intestines is besmeared with a ropy, inspissated, and glutinous mucous exudation, and the action of the absorbents remains suspended, medicines will not act and cannot act.

On this account calomel will not salivate, nor will opium stupify. With each gush of sero-mucous fluid from the bowels the medicines are discharged from the body as they entered, without having undergone any material change in their properties. On this account, also, one grain of lunar caustic brought into contact with the coats of the gastro-intestinal canal will exercise a more immediate and direct control over the morbid state of the mucous membrane, glandular bodies, and subjacent tissues, than calomel or opium, or any other description of medicine, however large the dose may be.

In administering calomel, if the object be to reduce inflammatory action through the medium of salivation, that end can be gained more easily and more speedily by the free use of mercurial frictions. In cases of recovery from cholera, in its second stage, where blood has been abstracted by cupping, and where blisters have vesicated, the second or third dressing of the raw surface with mercurial ointment has produced fetor of the breath, sponginess of the gums, and a flow of saliva from the glands. The action of mercury, introduced into the system from without, by friction, or by the application of mercurial ointment to a raw absorbing surface, has aided in protecting the patient against the serious consequences

of consecutive fever, and has also contributed to the termination of the case in a favourable and satisfactory manner.

CASE XX.—Ramdeen, a cooly, was seen in the second stage of the Indian village cholera. The symptoms were verging on the third stage. He was cupped extensively over the abdomen. The blood flowed at first sluggishly. After the second removal of the glasses the blood flowed more freely, and was changed in colour. A pill, containing five grains of lunar caustic, was placed on his tongue, and was washed down with copious draughts of cold water. In six hours after the cupping a blister was applied to the abdomen. Vesications formed. The vomiting was instantly checked. The purging was reduced to one gush of sero-mucous fluid from the bowels from the time that the caustic pill was swallowed. The pulse expanded in volume; thirst was allayed; heat returned to the extremities; the spasmodic twitches in the muscles of the legs and forearm, and in the course of the diaphragm, were removed. The progress of the disease was effectually checked.

The raw surface of the abdomen was dressed with mercurial ointment after the removal of the blister. At the third dressing the breath was fetid: the odour exhaled was mercurial: the gums were spongy. After the fourth dressing profuse salivation set in. After the action of the mercury had developed itself, there did not arise a single untoward symptom to retard his recovery.

The recovery in this, as in all similar cases of cholera, must be attributed to the administration of the lunar caustic before the disease had passed into the third stage. Under similar circumstances, the same satisfactory results have ensued from the extensive abstraction of blood externally by cupping, and from the use of lunar caustic internally.

The principle of treatment set forth in these notes is twofold. I do not claim for this plan of treatment that which I conceive to be a gross absurdity,—the merit of effecting a cure in every case, and under all circumstances. The antidotes for cholera are innumerable: their name is legion. Were we to judge of their infallible virtues by the registered rates of mortality, we must own that the percentage of deaths to

recoveries is unsatisfactory in the extreme. The list of anti-cholera specifics is so long, and so closely packed, that it need not be added to. Year by year the antidote list has been increased by an autumnal crop of cholera specific mongers, until it has extended to such a length that the eye wearies, and the intellect flags, in endeavouring to select from so great a variety that miraculous agent which will rescue the victim of cholera from the grave, and reanimate his lifeless system.

A member of the medical profession, who had emigrated from Aberdeen to London, assured me not many years ago that he had hit upon an antidote for cholera. That form of disease called English cholera was raging at the time, but was confined to the localities of the poor. In the narration of the miraculous cures effected by his antidote his eyes brightened,—a glow of triumph flushed his face. He had pictured to his mind's eye success in gaining by rapid strides eminence in his profession, and with it of securing an extensive and lucrative practice in London.

His were the visionary dreams of an enthusiast. He had combined opium with some other drugs, and had treated with success a few cases the symptoms of which resembled cholera. Elated with the results, and flattered by the congratulations of his grateful patients and their friends, his judgment became warped. In an evil moment he drew up a detailed account of his cases, skilfully and successfully treated, and committed the valuable document to the fostering care of the junior editor of a daily paper,—a fellow-emigrant from Aberdeen. The communication was ushered into the world, in company with an eulogistic editorial leader. The epidemic assumed a more formidable type, and with it the number of his patients increased. I hastily concluded he was travelling at a railroad pace on the high road to fame and fortune in the great metropolis, as I was informed he could not call an hour his own.

A few weeks before I quitted London for British Guiana I met my friend by appointment. He appeared downcast: care and anxiety had shaken his self-confidence. Something had gone wrong, either with his antidote, or with the type of the disease, since he had started into such extensive practice.

He was unreserved in his manner, and communicated to me that he was fagged off his legs with professional business; but that latterly he had lost, in the most unaccountable manner, several patients, amongst whom was his staunch friend and patron, the junior editor, and another, an attorney, upon whose recovery depended his introduction into a circle of respectable feeing patients.

This was not all. Had his misfortunes stopped here, his skill and judgment as a practitioner might not have been tested by his success in practice. It is more than probable the value of his antidote in ridding the world of a newspaper editor and of an attorney would have been tested by the opinion of the uncharitable. Such is the force of prejudice against these two classes of the community, that a person unfeelingly remarked at the time, the doctor and his cholera antidote deserved to be canonised as sterling benefactors of mankind.

A greater misfortune was in store. In his visits to patients, the emigrant surgeon from Aberdeen had encroached upon the purchased rights of a London general practitioner, who had an inveterate dislike to Scotch interlopers. The envy of this apothecary, chemist, and druggist,—all three combined in one,—had been roused by the newspaper success of the cholera antidote. Pills prescribed by the score, and draughts by the dozen, within the beat of his purchased rights, in his opinion was the perfection of practice in medicine. For such privileges, secured by parchment documents, he had invested his money.

The unfortunate mishap which had befallen my friend's cholera antidote did not lie buried in the graves of the newspaper editor and of the attorney, solicitor, and proctor: it was stereotyped in a living newspaper. Through the publicity given by this splenetic apothecary, his Scotch rival and the cholera antidote were driven out of the neighbourhood. To such a length was the persecution carried, that the latter accepted an offer to proceed to the United States of America, and quitted London in disgust.

Thus much, however, may be recorded in favour of the treatment recommended. Of one hundred cases of the Indian village cholera, admitted

into hospital in the first, second, and third stages,—if an equal division of the cases in each stage be made, and one-half be treated on the principle of abstracting blood locally by cupping, and of arresting the secretions of serum, mucus, and lymph, by the administration of lunar caustic internally, the mortality will be numerically less than in the second half, treated on any other plan with which I am acquainted.

[To be continued.]

SUPPLEMENTS TO SCIENTIFIC WORKS.

SIR,—The advance continually being made in the medical and physical sciences renders books upon these subjects which have been published but a few years, comparatively out of date; they are either superseded by others containing more recent and accurate information, or, if reproduced, require alteration and the addition of new matter in each successive edition. Thus an individual desirous of at all keeping pace with the progress of science is subjected to a considerable expense in procuring new editions of books already in his possession.

My object in addressing you is to request your recommendation of the more general adoption of publishing supplements to standard works. They might appear with every new edition of the work, and would thus constitute a history of the science or subject upon which the work is written since the date of the preceding issue. Or if (unfortunately) a new edition should not be called for, an appendix might with propriety be published on the occurrence of fundamental changes in the views promulgated, or the accumulation of much new information. The labour to the author would be trifling, the sale certain (P), and the benefit extensive.

An excellent example of the class of works desiderated appeared a couple of years ago in the form of a Supplement to the second volume of "Müller's Physiology." Why do not the authors of that work (Drs. Baly and Kirkes) favour us with a similar appendix to the subjects embraced in the first volume? A second edition of Professor Graham's valuable "Elements of Chemistry" has, I believe, been recently published. I am sure that all possessors of the first edition of that admirable work would receive with pleasure from the learned Professor a history of the progress and discoveries of chemistry during the last eight years.

Hoping that this suggestion may be favourably received and acted upon,

I remain,

Your obedient servant,

MEDICUS.

June 21st, 1850.

MEDICAL GAZETTE.

FRIDAY, JUNE 28, 1850.

THE close of another volume renders it necessary that we should occupy the brief space which can be allotted to this part of our journal with a few remarks addressed to our friends and contributors.

We do not think that the volume just completed will be found inferior to any which have preceded it in the extent, variety, or practical utility of the papers which it contains. For this we have to thank those kind friends and contributors who have unceasingly kept us supplied with the materials necessary for the maintenance of the character of this long-established periodical. To some of them, the publication of whose papers has been delayed, apparently for a very unreasonable length of time, we feel that we owe an apology. They must have observed that our space is limited, and that with the wish to give the greatest variety to the contents of the journal, we are under the necessity of occasionally holding back the original communications. We trust that they will accept this as a sincere statement of the fact: they may rest assured that, as far as it is possible, and the variable length of the papers will admit of this arrangement, each is inserted in turn, according to the date at which it has been received.

It is not our practice to indulge in Orientalisms: We do not say that our table is groaning under the overwhelming weight of contributions from the most exalted members of our profession; but we have, nevertheless, a respectable assortment of lectures and papers for publication in the new volume. We cannot undertake to publish "an unrivalled list of contributors."

We have been rather taken by surprise in finding that the names of many of our old and valued correspondents have recently been displayed in the columns of a contemporary as gentlemen who intend to give to that journal their literary support. We have made inquiry of several who have been thus advertised, and have ascertained that while the names of the writers thus appear in the pages of our contemporary, their lectures and papers will be sent, as heretofore, to the LONDON MEDICAL GAZETTE. If the profession are satisfied with this mode of dispensing literary patronage, we have nothing to say to it. It is to be regretted, however, that professional men should allow their names to be advertised as "eminent supporters" of a journal to which they either do not intend to contribute at all, or to send, perhaps, one paper in a volume, just to carry out the appearance of support. It has a bad effect with the profession; for, unless such expectations be realised, it gives the character of puffing even to *bonâ fide* announcements. Perhaps, however, the nature and object of these trade circulars are at once apparent to the greater number of professional journal-readers.

In the present volume we have completed the Lectures on Disorders incident to the Puerperal State, by Professor Murphy, and the Lumsian Lectures, delivered at the Royal College of Physicians by Dr. R. B. Todd. The courses of lectures begun, but not completed, are those of Dr. O. B. Bellingham on *Diseases of the Heart*, and of Professor Paget on *Inflammation*. These will be continued in the new volume: and, in addition, we have to announce the intended publication of courses of lectures on *Clinical Medicine*, by Dr. R. B. Todd, Physician to King's College Hospital, and on the *Medical Jurisprudence of Insanity*, by Dr. Robert Jamieson,

Professor of Medical Jurisprudence in King's College, Aberdeen.

Among the *Original Contributions* we shall continue the publication of the papers by Dr. J. C. Hall, on the *Pathology, Diagnosis, Prevention, and Treatment of Consumption*, and those by Mr. Moore on *Indian Cholera*. Other papers on various subjects of interest in medicine and pathology, which have been some weeks in our hands, are also nearly ready for publication.

We again thank those who have kindly lent us their assistance; and we beg to assure them that nothing shall be wanting on our part, in the conduct of the journal, to secure the continuance of their support.

OBITUARY.

PROFESSOR BURNS.

On the 18th inst., near Portpatrick, in the wreck of the *Onion* steamer, Dr. Burns, Professor of Surgery in the University of Glasgow.

GEORGE THWAITES, ESQ.

On Monday, the 17th inst., at Appleby, Westmoreland, George Thwaites, Esq., M.D., in the 54th year of his age.

DR. MAC MUFFIN.

On the 17th of December last, at sea, on his passage to Australia, Dr. Mac Muffin, Deputy Inspector General, Army Medical Department.

DR. BROMET.

On the 7th instant, at Bologna, Dr. Bromet, F.S.A., late surgeon of H.M. 1st Regiment of Life Guards.

JOHN GREEN CROSSE, ESQ.

On the 9th inst., at Norwich, Mr. John Green Crosse. The deceased had obtained a well-earned reputation by his numerous and valuable contributions to the advancement of medicine and surgery. These were published principally in the *Transactions* of the Provincial Association, of which institution he had been a president, and was at the time of his decease a vice-president. His principal work is an "Essay on Urinary Diseases," for which he obtained from the Royal College of Surgeons their Jacksonian Prize in 1833. Mr. Crosse was a member of several distinguished societies, both at home and abroad.

LECTURES

ON

LACTATION, AND THE DISORDERS
INCIDENT TO THE PUERPERAL
STATE.

BY E. W. MURPHY, M.D.

Professor of Midwifery, &c. in University
College, London.

LECTURE XIX.

NATURE OF PUERPERAL FEVER.

Distinct from puerperal peritonitis—In the worst form there may be no peritonitis—Mackintosh's theory of latent peritonitis invalid—Importance of distinguishing the terms "puerperal fever" and "puerperal peritonitis"—Equally distinct from phlebitis, metritis, &c.—Cause of the difference the presence of a morbid poison—Puerperal fever obeys the same laws as other symptomatic diseases—It has a definite action—A period of latency—The dose varies—It observes a law of incubation—Vitiation of the blood: by a specific morbid poison: by the cadaveric poison; by erysipelas—Treatment, prophylactic and remedial—Chlorine—Principle on which depletion, emetics, purgatives, and other antiphlogistics, have their effect—Stimulants—Turgescence.

GENTLEMAN.—What is puerperal fever? Is it a common term, applied to the various forms of inflammation met with in the puerperal state, to peritonitis, phlebitis, metritis, &c., or is it an essential disease distinct from these? These questions are very important, because on the truth or falsehood of them depends the leading principle which must govern our treatment. In order, then, to arrive at some conclusion respecting the nature of puerperal fever, and to free the question from many of the complications that surround it, let us first, by a process of negation, determine what puerperal fever is not. Are puerperal fever and puerperal peritonitis one and the same disease? If we are able to maintain the negative of this proposition, and prove that puerperal fever is not puerperal peritonitis, we shall make an important step towards simplifying this inquiry. Some of the greatest difficulties that encumber the subject arise from the opposite views that are held on this point. The confusion of terms,—and, we might add, the confusion of treatment,—that constantly present themselves, have their origin in no other cause than our uncertainty with regard to this important ques-

tion. I hold, then, that puerperal fever and puerperal peritonitis are distinct diseases; that one may exist in the absence of the other; and that, although inflammation of the peritoneum most frequently forms part of the disease which we name puerperal fever, this special inflammation stands to it in the relation of an effect to its cause. Puerperal fever differs from peritonitis in the mode of its attack, in its symptoms, in its morbid appearances, and, we think, in its treatment. Whenever inflammation of the peritoneum takes place, it is always traceable to some obvious cause. A difficult and protracted labour is followed by inflammation of the womb, that extends to the peritoneum. The extreme refrigeration used to check hæmorrhage may be followed by peritonitis. If the patient be exposed to sudden draughts of cold air, or is over-heated and given improper food, these also become exciting causes, and inflammation of the peritoneum may be the result. But when there is no such obvious cause, when a patient after a most favourable delivery, and notwithstanding the most judicious management, is seized with symptoms of peritonitis, such an unexplained attack, quite contrary to our ordinary experience, affords a just ground for supposing that the disease we now see is different from that inflammation we have been accustomed to observe, we may further conclude that the essential difference between the two inflammations exists in some unknown cause that is in operation in this latter case where no manifest cause of seizure is present. This conviction is strengthened, when we find, without any apparent reason, the most intense severity in the symptoms. In ordinary cases, inflammation of the peritoneum occupies some days in its progress before it arrives at a fatal termination: in this instance the patient may be at once prostrated by the attack, and death take place within twenty-four hours. The symptoms of peritonitis may be present, but they are those of the second stage,—the stage of exhaustion. The inflammatory symptoms, or those of the first stage, are absent, as if they had not time to develop themselves because of the intensity of the seizure. Hence, then, an inflammation that comes on, as it were, of its own accord, without any provocation, and that runs an unusually rapid and fatal course, cannot be considered an ordinary inflammation. The manner of its approach demonstrates that it has a special character; and thus far we may assert that the peritonitis of puerperal fever and puerperal peritonitis are not the same inflammations. But we may have puerperal fever without a single symptom of peritonitis, without a

single morbid change in the peritoneum: that is, the patient may be seized with a rigor, with some tenderness in the uterus or in the abdomen; and, before the commencing inflammation becomes manifest, she may sink into a state of collapse, the tenderness disappear, and after death the peritoneum be found pale and unaltered. Such has been observed in the very worst cases of the disease the nature of which we are now discussing; and they afford incontrovertible evidence that inflammation of the peritoneum, or, indeed, of any other structure, is not an essential element of puerperal fever. The late Dr. Mackintosh ingeniously argued that these cases were only peritonitis in its most intense form, accompanied by extreme congestion in the venous circulation; that the oppression on the nervous system was so great as to destroy all sensation of pain,—all activity of function. Consequently, there was no tenderness,—no effusion,—none of the ordinary evidences of peritonitis. Hence he insisted upon the importance of free and bold depletion to relieve this condition, and argued that when the oppression was removed the latent inflammation would become manifest. The reasoning was ingenious, but the practical test of its truth, depletion, proved its fallacy. Loss of blood, was found only to hasten a fatal termination; and every writer of any authority cautions his reader against depletion in these cases. Even Dr. Armstrong, the warmest advocate for the lancet, and who names this “the congestive disease,” speaks with great hesitation about bleeding. He compares a case of this kind to surgical cases “when the nervous system has sustained some great shock from an accident. The skin becomes universally cold, the blood retires from the surface into the interior, and the heart’s action is extremely oppressed. Under such a state of things it is an admitted principle in surgery not to bleed immediately; and, indeed, when it is done, death is often the consequence.”*

The symptoms of peritonitis and of puerperal fever accompanied by inflammation of the peritoneum do not precisely correspond. They agree in the diffused pain and general distension of the abdomen; the stomach is equally irritable in both cases; the patient is watchful and anxious; but they differ in many respects: for instance, in peritonitis the bowels are constipated often to such a degree as to resist the strongest purgatives. In puerperal fever diarrhoea may be one of the first symptoms that usher in the abdominal tenderness. The pain in peritonitis gene-

rally commences in the neighbourhood of the uterus, and takes a certain time to diffuse itself over the abdomen. Such may be the case also in puerperal fever; but, in many instances of the latter disorder, the pain commences in the neighbourhood of the diaphragm, shooting through the ribs and epigastrium in violent stitches, and then spreads over the abdomen. The pulse in peritonitis is inflammatory, increasing with the inflammation, subsiding as it is subdued. In puerperal fever the pulse is febrile, observing periods of increase and decrease independent of local symptoms: nay, when these have disappeared under the influence of treatment, the pulse may still remain at its former rate quite unaltered. This fact deserves particular attention, because it proves that the pulse, and not the local symptoms, is the surest evidence of the state of the patient. The countenance is not exactly the same in each case. In peritonitis anxiety and suffering are chiefly expressed: in puerperal fever despondency is combined with them, and gives the countenance a peculiar and characteristic expression that is not easily described. Headache is not generally observed in peritonitis, although a frequent symptom of puerperal fever. Thus the symptoms, which in both diseases seem to resemble each other, will be found, on a closer examination, not to agree, but to present sufficient points of difference to distinguish one from the other. If you ask me for a diagnostic symptom, I should direct your attention to the influence of inflammation on the intestines. Pure inflammation of the peritoneum at once suspends their action, and produces constipation. That inflammation which belongs to puerperal fever has no such effect: on the contrary, diarrhoea is often one of its earliest symptoms.

The morbid appearances, like the symptoms, will admit of a distinction being drawn between them; for instance, in peritonitis, all the arterial capillaries are highly injected: hence the intestines are streaked with bright red lines of capillaries that encircle them. In puerperal fever the venous capillaries predominate: hence the livid hue of the intestines, and the dusky red colour of the patches and streaks on their surface. In peritonitis the lymph which is poured out is adhesive, uniting the different parts like glue: if removed from the surface of the intestine on which it is deposited, strings of this lymph are broken across, and the surface is rough; the quantity of serum poured out is not great, and, being lodged in the cavity of the pelvis, may at first escape observation. In puerperal fever that which we call lymph is not adhesive: it is much more

* Armstrong, p. 137.

abundant than true lymph, covering the fundus of the uterus, the intestines, the liver, the diaphragm: it is found also in the pleura: its colour varies from a dusky brown to a pale yellow: it may be peeled off the liver, the intestines, or the uterus, quite easily: the surface from which it is taken is smooth, and in the intestines is of a dark red colour. The quantity of serum is equally profuse; and this substance being dissolved in it, gives it a lactescent appearance, like pus: hence it is called sero-purulent fluid. Thus, when the abdomen is opened, a large quantity of this fluid always escapes. It will be objected that this sero-purulent fluid is also met with in peritonitis. This is perfectly true; but it is necessary to note the stage of the inflammation in which it is observed. I have never met with it unless in the second stage of the attack. When a patient died in the first stage there was none of it. I conclude, therefore, that in the former instance such effusions only occurred when the constitution was sinking under the attack; but in the latter, when death took place from a different cause, the effusions noticed were the true products of inflammation. In puerperal fever, the greater the intensity of the seizure the less the chance of meeting anything like lymph. In the most intense forms no effusions at all may take place. In a degree less intense, a large quantity of serum coloured brown by blood is found in the peritoneum and throughout the tissues: the lymph poured out is of the same colour, having no adhesion to the surface on which it lies, as if the fibrine of the blood had been deposited there. In the next degree the same kind of lymph or fibrine is found, of a yellow colour, with a quantity of sero-purulent fluid. And lastly, in those cases in which the constitution for a time struggles successfully against the fever, some adhesive lymph will be met with, mixed up with a larger quantity of what I have called fibrine. You will perceive, then, that it is in protracted cases of either disease that the morbid appearances most nearly resemble each other; but that, in cases which are quickly fatal, the distinction between them is quite sufficient to enable us to separate one from the other.

It appears to us, then, that neither in the manner of the attack, nor in the symptoms, nor in the morbid appearances, are puerperal fever and peritonitis perfectly alike. We shall presently show you that there is a difference also in the treatment. We are not justified, therefore, in calling one disease by the name of the other; and it appears to me just as absurd to call puerperal fever, attended with inflammation of the peritoneum, puerperal

peritonitis, as to name every case of pure peritonitis that is met with after delivery, puerperal fever. The importance of this distinction will be admitted if we reflect on the serious mistakes that may arise, and which, in fact, have arisen from such confusion of terms. If, on the one hand, we call puerperal fever peritonitis, we deceive ourselves in the belief that we are only treating an inflammation, which, although severe, perhaps fatal, differs in no respect from peritonitis in the non-puerperal state, or in the male. Our treatment, therefore, may fail because it is misdirected, and the disease that we so name may spread rapidly. On the other hand, to call peritonitis puerperal fever is to sound an alarm most unnecessarily, and may be the means, perhaps, by injudicious treatment, of losing a patient that otherwise might be saved.

If the observations we have made in reference to peritonitis are correct, we may *a fortiori* apply the same line of argument to metritis, phlebitis, and to the inflammation of such of the tissues as are involved in the destructive course of puerperal fever. Inflammation of the veins, however, presents the greatest difficulty in drawing the line of distinction; and for an obvious reason. In both diseases the blood becomes poisoned,—by pus in phlebitis, by a special morbid poison in puerperal fever: the symptoms, therefore, of poisoning, are the same in both, and the morbid appearances are very similar; nevertheless, it appears to me that a line may be drawn between them. In phlebitis some one or other of the uterine veins present distinct evidence of being inflamed: they not only contain pus, but their coats are thickened and florid; the inflammation is also confined to certain veins not extending through the uterine veins, but rather passing outwards and involving the hypogastric and pelvic veins. In puerperal fever, the uterine veins, especially in the neighbourhood of the broad ligaments, are very commonly filled with pus, or at least with a purulent-looking fluid: if this be wiped away, the coats of the veins are pale, smooth, and of their natural thinness. This fluid is found spreading through a number of these vessels, and often lies outside their coats between them and the uterine fibres. The same kind of pus is contained in the walls of the uterus, forming small abscesses: the quantity of this fluid varies, but in some instances is very abundant. In the case already alluded to, the whole uterus was so infiltrated as to present the appearance of a phthisical lung. It appears to me,

therefore, that although the symptoms and morbid alterations produced by phlebitis have some resemblance to those which are caused by puerperal fever (perhaps we should rather say by erysipelas), there is still a sufficient difference not to confound one with the other. It is important, therefore, to use the same strictness in language here as in peritonitis. Puerperal phlebitis and erysipelas are not the same thing. Puerperal phlebitis and puerperal fever are different diseases. To some it may appear an unnecessary refinement to make this distinction between diseases that resemble each other in so many leading points. The question may be asked, what is the essential difference between them? To this I would answer—the essential difference exists in the presence of a new element in puerperal fever, not met with in ordinary inflammation. When simple inflammation affects any of the tissues, a reparative process is set up to circumscribe the disease and to prevent its extension: this is remarkably the case in inflammation of the veins where the diffusion of pus in the circulation causes so much mischief. The moment pus mingles with blood coagulation takes place: the clot becomes adherent to the sides of the vein, and pus is confined. If this attempt be not successful in the first instance, a second and third effort is made to accomplish the same purpose; and thus along the line of the veins, even to the capillaries, we find circumscribed abscesses formed to get rid of the pus. So also in peritonitis, adhesive lymph is thrown out, uniting the different surfaces, in order to limit the inflammation. But when inflammation attends puerperal fever, the process is altogether destructive of the tissues engaged. In the peritoneum the lymph is not adhesive: the inflammation is never circumscribed, and the peritoneum is softened, sometimes to such a degree as to appear gangrenous. In the womb a similar process of softening takes place, and in the veins pus is diffused without limit, and is found deposited more or less in all the tissues. Thus, then, the essential difference between puerperal peritonitis and puerperal fever, between puerperal phlebitis and erysipelas, is the same as exists between union and disunion, between building up and taking to pieces, between reparation and destruction. It remains for us to consider what is this new element that is present in puerperal fever. We have already alluded to a special morbid poison. This poison we believe to be the agent which exerts its fatal influence over all the phenomena that are observed in this disease. Assuming such to be the case, puerperal fever forms one of the class of zymotic diseases, and we shall find in it

as complete an illustration of the laws of morbid poisons as in any other of these disorders. First, it is a uniform disease. The best descriptions of puerperal fever in the present day differ in no essential particular from the accounts handed down to us of the malady that raged 100 years ago. Then as now it appeared suddenly, and its presence completely changed the scene. It followed a most destructive course, seizing upon all alike, and causing such devastation as to excite a panic equally in the minds of the profession and the public. Its disappearance was just as sudden and as unexplained as its advent. Such is the manner of its approach and departure in the present day. In this respect it resembles typhus fever, yellow fever, cholera, and other diseases that are known to be produced by morbid poisons. Again, when the poison is present, the most trifling causes will produce the disease; when it is absent, causes much more exciting have no such effect. If further we observe closely the phenomena of puerperal fever, we shall still find it obeying the same laws as other zymotic diseases. The poison has a certain and definite action. The poison of typhus acts specially on the glands of the small intestines. Cholera on the whole gastrointestinal mucous membrane. Influenza on the pulmonary mucous membrane. Scarletina and measles on the skin. The definite action of puerperal fever seems to be on the serous surfaces. The peritoneum is chiefly engaged, because in that serous membrane absorption goes on much more rapidly than in others. During pregnancy the peritoneum has been gradually stretched to its utmost extent. After delivery it rapidly returns to its original dimensions, and therefore is much more readily exposed to the absorption of any poison. Beside this, the uterus and vagina are undergoing the same rapid changes, and quickly convey any poison to the serous membrane that is in immediate relation to them. The peritoneum is therefore most prominently affected, but the pleura does not always escape, and in a few instances the arachnoid is engaged. We consider, therefore, that the virus of puerperal fever has as certain and as definite an action as any other morbid poison. Secondly, it is well known that morbid poisons have a certain period of latency. So also the symptoms of puerperal fever do not show themselves until a certain period after the absorption of the poison. It is difficult to determine precisely the interval of latency, because it is not easy to decide in all cases when the absorption took place; but if we take as examples those instances in which it seems to have been directly communicated at the time of delivery, forty-eight hours seems to

be the period which the disease takes to develop itself. Thirdly, the dose of the poison varies. This law will assist us considerably in removing some of the difficulties that surround this subject. If the dose of a poison be excessive, its specific action may not be exhibited. Thus the mineral poison, arsenic, that acts so violently on the mucous membrane, may destroy without a single symptom of inflammation during life, or a single morbid appearance after death, if the dose be so excessive as to paralyse the nervous function. It is well known that a patient may fall prostrate from the typhus poison, and present no other morbid change than cerebral congestion: so, in puerperal fever, patients have been promptly killed by it without producing any alteration in the tissues; the veins as in the former case being alone distended. It is not necessary, therefore, to assume that Armstrong's "congestive disease" must be a latent peritonitis in order to explain these appearances. When the dose of the poison is not so intense, the specific form of inflammation becomes manifest, in which excessive effusion of serum and non-plastic lymph, with softening of the tissues, form the characteristic features. Lastly, the dose may be such that the constitution has the power to throw it off, and the patient will recover; or, if death take place, evidences of true inflammation will be observed mixed up with the special effects of the disease. The law of incubation is the same in puerperal fever as in certain other zymotic disorders. The same causes that generate typhus fever, imperfect ventilation, foul air, an epidemic constitution of the atmosphere, will produce puerperal fever; but besides this, the direct absorption of putrid matter will do so. Dr. Routh has pointed out the effect of cadaverous effluvia in exciting and increasing to a frightful extent this fatal malady. Those who are in the habit of dissecting know how difficult it is to remove the smell of the dead body from the hands. They may be washed again and again, and yet the smell remains: this proves the tenacity of the effluvia. Dr. Routh has shown that it acts as a poison when absorbed by the vagina. In the Vienna Hospital this cadaveric poison was communicated by the pupils who came from the dissecting-room to attend cases of labour. They did not use sufficient precaution to prevent contamination, and puerperal fever was the result. I have been informed by Dr. Routh that the same effect is observed in one of the Paris hospitals, but produced in a different manner. The hospital is situated near one of the great abattoirs, and the presence or absence of puerperal fever depends almost on the point from which the wind blows. The

hospital is safe so long as its direction is towards the abattoir; but when the current is reversed, and the cadaveric effluvia is blown over the hospital, then puerperal fever begins. From these facts it will be admitted that puerperal fever is the result of the absorption of a morbid poison. The phenomena sometimes exhibited also prove that the poison and consequent fever may be present without any local inflammation; and hence we must infer that the inflammations observed are secondary: that being caused by the operation of a poison, they are of a specific character, and therefore differ totally from inflammations of the same structures that are not produced by vitiation of the blood. We are indebted to Dr. Ferguson for a very able chain of proofs which demonstrate that "the phenomena of puerperal fever originate in a vitiation of the fluids, and that the various forms of puerperal fever depend on this one cause of vitiated blood, and are readily deducible from it." The causes that vitiate the blood we believe to be various. One of them, and the leading cause, is the specific morbid poison to which we have alluded, which will act quite independently of local causes. Another is the cadaveric poison, which includes the absorption of putrid matter from whatever source it may be derived. A third cause of vitiation is the poison of erysipelas: we know that two morbid poisons may coexist and be in operation at the same time, yet cannot be considered identical. Thus typhus fever and erysipelas frequently go together: measles and scarlatina often accompany each other. So it may be that while the poison of puerperal fever is acting chiefly on the serous membranes, we find the poison of erysipelas also pursuing its definite course on the skin, cellular tissues, and veins. These several poisons may each vitiate the blood, and produce the variety of symptoms that are met with in this disease, and are classified into forms and varieties of puerperal fever.

The treatment of puerperal fever must be considered in reference to the views of the malady which we have placed before you. It divides itself into two questions. First, the prophylactic treatment,—the means of preventing the diffusion of the poison. In discussing this question I shall not draw you into the perplexities of contagion or non-contagion, which has been quite as warmly debated in puerperal fever as in cholera. I must ask you to assume with me that it is contagious, not only because of many stubborn facts that cannot otherwise be explained, but because it is the safer view for you to take. If it be not contagious, any precautions you take may be unnecessary, but they can do no harm:

on the other hand, if it be contagious, the neglect of such means of prevention would do infinite mischief. We have already alluded to the rapid diminution and ultimate disappearance of puerperal fever in the Dublin Lying-in Hospital, when Dr. Collins put into force active sanitary measures. The chief agent employed by him was chlorine. Dr. Routh gives an interesting account of the means adopted by Dr. Semelweis, for preventing the spread of the disease. "He recommended all students frequenting the division (the labourwards) not to handle dead matter, or if they did, he forbade them to make any examination till the following day. In the second place he directed all the students who attended the practice of the division *to wash their hands in a solution of chlorine prior to and after every (vaginal) examination made on the living subject.* The result of these precautionary measures was that the number of deaths at once fell to seven per month."* They had been from 30 to 70 per month, and we can assign no other cause for this great difference of mortality than the means used by Dr. Semelweis for preventing the communication of the disease. The prophylactic was chlorine, and hence, comparing the facts related by Dr. Collins with those of Dr. Semelweis, this gas seems to have the power of destroying the poison. In order, therefore, to prevent the diffusion of puerperal fever, chlorine is essential. Solutions of it should be freely used, the hands washed, and the sheets of the bed sprinkled with it, even at the risk of damaging their texture. The vapour of chlorine should also be diffused through the apartment. I am inclined to think that the chlorates of soda or potass taken internally would be useful on the same principle. Besides these means the practitioner should also be careful, if in attendance upon a case of puerperal fever, to change his dress before he visits another patient in labour. The fomites of the fever have been known to lurk about the dress of the attendant, and reproduce it after a period much later than might be imagined. In one ward of the Dublin Lying-in Hospital, the fomites remained for months, and renewed the disorder. If proper precautions are used I am satisfied that there is no danger of communicating puerperal fever; but I fear that in some instances a want of caution has had this effect. The practitioner may have been led astray by the theorist, who tells him that puerperal fever is nothing but a local inflammation, which we know is not contagious; or he may imagine that there is no risk because some of his patients may

have escaped contamination. Errors of this kind, we have reason to think, have led to the dissemination of the poison, and should be carefully guarded against.

The remedial treatment has been a warm subject of controversy, chiefly arising from the different views of the disease that have been advocated. Those who hold the doctrine of local phlegmasia defend an active antiphlogistic treatment, while the advocates of the epizotic character of puerperal fever maintain the importance of supporting the constitution against the attack. It appears to us that the treatment of both, to a certain extent, is correct, although the principle on which the antiphlogistic plan is founded we believe to be erroneous. Depletion, purgatives, emetics, certainly reduce inflammation, because they diminish the quantity of the blood and the velocity with which it is impelled by the heart; but the very same means, by lessening the quantity of poisoned blood, and by acting as evacuates to discharge a poison from the circulation only, renders the blood more pure and less dangerous than it was before. These remedies are beneficial, therefore, not as antiphlogistics, but as antiseptics. If we act on such a principle the only question we have to decide is—Can the patient bear the treatment? Has the constitution sufficient power to recover itself from the loss occasioned by the treatment when it is already prostrated by the influence of a poison? We believe that this question will admit of no general answer; we can only speak with a special reference to the constitution and the conditions in which it is placed. If the dose of the poison be excessive, evacuates are inadmissible, because the constitution has no power no reaction. On this principle we object to depletion in Armstrong's "congestive disease," and consider Mackintosh's doctrine of "latent peritonitis" altogether fallacious when, applied to puerperal fever. If but little be absorbed, and the prominent symptoms are of a sthenic character, evacuates are the most efficient, because the poison is rapidly removed, any local inflammation is promptly subdued, and the constitution soon recovers itself. Between these extremes there is every shade of intensity in the disease, which almost renders each case a separate subject of consideration. In some the evacuant treatment, in others the stimulant, is successful. In those situations where the poison is concentrated, as in hospitals, or in places where it suddenly appears and commits great devastation, we think that the stimulant practice is most advisable. The remarkable success of Dr. Copland's practice in the Queen Charlotte's Hospital, is a sufficient illustration of this truth, and may be con-

* Medico-Chir. Trans., vol. xxxii. p. 36.

trusted with the failure of Armstrong's treatment in the Dublin Lying-in Hospital, about the same period. On the other hand, when the poison is diffused, as in private practice, evacuants may be employed with advantage: at the same time it is right to observe that the natural strength of the patient's constitution forms an important element in determining this question. It is very well known that the strength of constitution varies with the locality. The inhabitants of London, for instance, do not bear the same activity of antiphlogistic treatment as those of Dublin or Edinburgh. The residents of a country district, breathing a purer air, and enjoying active exercise, or occupied in rustic duties, have stronger constitutions than citizens; and thus, when we would wish to form a fair estimate of any proposed treatment by the evidence of its success which is adduced, it is very important to inquire where the cases treated have lived. Dr. Gordon's and Mr. Hey's were chiefly rural practices. Dr. Armstrong's and Dr. Mackintosh's scattered over a town; and although each met with cases of intense puerperal fever, they were the exceptions, not the rule: we have every reason to think that their "clientelle" consisted of patients with naturally strong constitutions that would admit of free evacuation. You may meet, however, and in cities often will meet, with patients whom you cannot bleed, and who require stimulants; we cannot, therefore, lay down a general rule, unless it be that of Sydenham—"to study the constitution of the year," and we would add, "of the place." Having premised these general observations, we shall proceed to consider separately the remedies usually employed; and first, with regard to the evacuants.

Depletion is more generally employed than any other mode of treatment. Dr. Ferguson, after a most careful and cautious inquiry, gives the following as the sum of his experience of bleeding as a remedy in puerperal fever:—"Of all the means we possess of arresting this malady, I believe bleeding, general or local, to be by far the most extensively applicable. The cases in which it is not so are exceptions to the rule."* We fully agree in this opinion, but we do not consider depletion efficacious because it is an antiphlogistic, but because it is a most rapid evacuant. On this principle alone can we explain the efficacy of the very bold depletion sometimes employed. We do not treat peritonitis by taking away very large quantities of blood, and there are some forms of it in which we cannot bleed at all. Yet in puerperal fever Hey took twenty, thirty,

even fifty ounces of blood from the arm. Mackintosh says—"In some fortunate cases, the histories of which were lost in my travels, I can well remember abstracting between forty and fifty ounces at one bleeding."* In order that depletion be efficient it should be promptly undertaken the moment that a rigor gives evidence that the poison is absorbed: the removal of blood then is attended with the best effects; but at a later period, when time is given to alter its properties, and to soften the tissues, when effusions take place, depletion has a contrary effect; the strength of the patient at once gives way, and death rapidly follows. Such we believe to be the principle on which depletion, when it may be adopted, is useful; but you must always bear in mind that it may be quite inadmissible,—you must carefully inquire into the character of the epidemic, the constitution of your patient, and, as I have said, the constitution of the place. If you seek among the symptoms for a guide to determine your practice, I know of none we can depend on but the pulse, and even that is uncertain. If the pulse be firm and wiry you may bleed, but if it be compressible and unsteady you cannot do so. In the former case the constitution is struggling against the disease, and manifests a degree of vigour that will admit of depletion. In the latter, it is rapidly giving way under the attack, and depletion only hastens debility and its consequence, death: but although this is generally true there are often exceptions in both cases which may deceive you. Depletion, therefore, sometimes must be tried as an experiment, and if so, should be had recourse to as soon after the rigor as possible; at a later period it should never be employed. In hospital practice, and with women in the lower walks of life, who have been subjected to privations or causes of mental depression, we would not think depletion advisable.

Purgatives, also, act as evacuants, and those that have had the most power in this respect have always been the most efficient. The hydragogue cathartics, which produce the most rapid and abundant discharges from the intestines, are preferred. The object is not merely to unload the intestines, but to produce catharsis. In one case, Dr. Armstrong having taken twenty-four ounces of blood from the arm, so as to induce fainting, gave a scruple of calomel and two ounces of strong infusion of senna, containing two drachms of sulphate of magnesia, every hour till copious evacuations should be produced. "In about four hours the medicines began to operate, and several copious, dark, fetid stools were

* Ferguson, p. 152.

* Mackintosh, p. 264.

discharged: from that time considerable relief was obtained, and a regular perseverance in purgatives, with mucilaginous drinks, and a small quantity of exceedingly weak chicken-broth, completed the cure in five days."* This, certainly, is not the treatment of peritonitis. If this active practice overcame the obstinate constipation that attends this inflammation, it would have the effect, not of reducing, but of greatly increasing it: but as a means of purifying the blood, by exciting an active secretion from the intestines, the practice is intelligible.

Emetics were among the first remedies discovered for the treatment of this disease. In 1782, Doucet at once checked the progress of this distemper by the free use of emetics: the hint was given him by Nature herself: one of his patients, who had been just attacked, made several efforts to vomit; he gave her a large emetic, which proved salutary. He continued them, and she recovered. This practice was repeated in every case, and with such remarkable success that it was supposed Doucet had found a specific; a second visitation, however, afterwards presented itself, and Doucet's specific was found to be of no use. Richter, Tonnellé, and Cruveilhier, also found emetics in some cases very useful. This practice, then, fails in some instances and succeeds in others. Can any reason be assigned for this difference of success? Dr. Ferguson, we think, has given the true explanation. Emetics are efficient "when the violence of the malady has fallen on the liver especially, and when there is early nausea and spontaneous vomiting." "In puerperal fever I have already noticed the frequency of nausea, biliary derangement, dusky staining of the skin, and jaundice; and it must not be forgotten that Gaspard and Cruveilhier have proved that one of the modes by which infection of the blood is relieved is through the liver. On these grounds, and within these limits, the use of emetics will be found rational and beneficial."†

Diuretics have received very little attention in the treatment of puerperal fever; yet, as evacuates, I believe them to be very efficient. In some cases I have found the free use of nitrate of potass of great value; and although as yet my experience of it as an evacuant in puerperal fever is too limited to speak with sufficient confidence, I am inclined to think that it is well worthy of a more decided notice from the profession. Its action may be explained on the same principle as emetics—the infection of the blood being relieved through the kidney in place of the liver.

Mercury is the only medicine that may be considered strictly as an antiphlogistic, and it is the only remedy of doubtful efficacy. Patients have been salivated with mercury, and no remission of the symptoms followed. Dr. Ferguson says—"With regard to the use of mercury in puerperal fever, I think that as a purge it may be used in all the forms with advantage, but not as a means of affecting the constitution."* Dr. Collins used mercury in combination with ipecacuan in large doses, four grains of each, every second, third, or fourth hour. In other instances he gave a scruple of calomel every second or third hour. "One patient took more than an ounce." Dr. Collins further remarks—"I could not observe any better effect from the large doses than the small: the system was not more speedily influenced; and when they did so act, it was often with violence, so as to endanger the destruction of the soft parts about the palate." In a note he observes—"It is supposed by some practitioners that when we can get the system under the influence of mercury recovery is certain. This is not the fact, as I have seen in several cases where death took place under these circumstances. It is, notwithstanding, a very favourable occurrence."† Mercury, therefore, seems to be the least efficient of the remedies employed.

Antimonials have been also employed. Boer used an unknown preparation extensively in the Vienna Hospital. Dr. Good supposed it to be "Kermes mineral;" Dr. Ferguson, "James' powder." Its action was chiefly on the skin, and was found to have a most beneficial effect. Dr. Denman derived considerable advantage from tartar emetic in the treatment of puerperal fever, acting both as an emetic and in increasing the action of the exhalants.

In the treatment, then, of puerperal fever by evacuates, the first question to decide is—Can the patient bear any evacuation? The extreme degree, the atavic form of the fever, admits of none. In the less severe varieties we may use some one or other of them, and it only remains to determine which we shall select. If the pulse justify depletion it is the most efficient when promptly adopted. Active saline purgatives may also be used in such cases with advantage. In more severe cases the lancet may not be employed, and yet other evacuates may be useful, which nature herself will sometimes indicate. The fever may commence with an attack of diarrhoea, and if, in place of checking it, we rather maintain the evacuation, the patient will recover. Bilious vomiting taught

* Armstrong, p. 32.

† Ferguson, p. 204.

* Ferguson, p. 223.

† Collins, p. 395.

Doubt the value of emetics, and so, with regard to the efforts to throw off the disease by other channels, the symptoms will point out the treatment. There are cases, however, in which no evacuation dare be attempted,—in which stimulants alone will save the patient; and when this course is pursued it must be a bold one—a hesitating practice is perfectly useless. Dr. Copland gave from eight to sixteen grains of camphor every four or five hours. On the same principle opium may be given to any extent short of narcotism; but by far the most efficient stimulant is turpentine, because it combines in itself a double power. It supports the constitution, or rather rouses its energies against the poison, while it acts as an evacuant in removing it. Turpentine may be combined with castor-oil, in half ounce doses, and given every three or four hours with great advantage. As a local application, also, it contributes greatly to relieve the abdominal pain which the patient experiences. With regard to this medicine, I have no hesitation in stating, with Dr. Copland, that "*there is certainly no remedy so efficacious as a decided and judicious use of spirit of turpentine.*" With these observations we shall conclude the discussion of this perplexed subject, fully aware that in our attempts to unravel some of its difficulties we originate new questions for discussion and controversy. If, however, we have succeeded in rendering intelligible to you the principles upon which it appears to us the most efficient plans of treatment have been successful, our object has been fully accomplished.

Medical Intelligence.

ACCIDENTAL DEATH FROM CHLOROFORM.

ON Monday last a case illustrative of the fatal effect of the incautious use of chloroform occurred at Sheffield, in the case of a Mr. J. Smith, a young man of twenty-one years of age. Mr. Smith retired to rest on Sunday night, about half-past 11 o'clock, at the house of Mr. Ray. In the night he was heard to moan, but it was concluded he was dreaming. As he did not appear at the usual time at the breakfast table, a domestic was sent to his bed-room, when he was found lying in bed, life being extinct. In his hands he held a handkerchief, firmly pressed to his mouth and nostrils. It appears the unfortunate gentleman had been in the habit of inhaling chloroform for the purpose of allaying the face-ache. A bottle which had contained chloroform was found uncorked in the watch-pocket of the

bed, and in a private drawer two bottles of chloroform were discovered. An inquest was held on the evening of Monday, when evidence establishing the above account was given, and also that the deceased had several times, when he inhaled chloroform, directed William Girt, formerly groom to Mr. Ray, to sit with him, and to rouse him when falling into a state of insensibility, which he had accordingly done. The post-mortem examination of the body showed the blood to be in a very fluid state and very dark in colour: the right cavities of the heart were distended with blood, the liver and kidneys slightly congested. No smell from which it could be ascertained that chloroform had been used could be detected. The deputy-coroner expressed his sympathy with the relatives of Mr. Smith, for whom he could feel most acutely, the case reminding him forcibly of the case of Mr. Walter Badger, his nephew, who died under similar painful circumstances in London. He had called upon a Mr. Robinson, a London dentist, to have a tooth extracted, and, having inhaled chloroform previous to the operation, threw back his head, and died almost instantly. The jury returned a verdict that the deceased's death had resulted from chloroform, incautiously administered by himself.*

VACANCIES IN THE COUNCIL OF THE COLLEGE OF SURGEONS.

MR. GRAINGER has authorised us to state that it is not his intention to offer himself for nomination to a seat in the Council of the Royal College of Surgeons at the election on July 4th.

RAILWAY LIABILITIES—SANDS COX & MIDLAND COUNTIES RAILWAY.

A MEASURE has been brought into the House of Commons by Mr. Newdegate, Mr. Richard Spooner, and Mr. C. B. Adderley, to provide medical assistance in cases of accidents on railways. The preamble of the bill recites that, whereas an action is not now maintainable against a railway company by a surgeon called in by the servant of a railway company to render assistance to a passenger who has been accidentally injured, it is right and expedient that oftentimes the company in such case should be answerable for the services of the surgeon called in. *It then proposes to enact that the servants of railway companies may call in surgeons in cases of accident, the acts of the servant to bind the railway company until notice is given to the medical attendant to the contrary.* A railway company may recover expenses from

* We have been informed that another case of death from chloroform occurred at Guy's Hospital on Wednesday last.

other railway companies in fault, and in case of a pauper passenger the company is to have a legal right to recover from the overseers of the parish in which the accident happened. The act, it is proposed, shall be affixed at every station along railways.

* * On Wednesday last, this bill was thrown out on the second reading.

ILLEGAL PRACTICE AT NEWNHAM—RECOVERY OF PENALTIES UNDER THE APOTHECARIES' ACT.

On Friday, the 7th inst., a verdict was recovered in the County Court of Newnham, by the Society of Apothecaries, against Mr. William Boyle Norcott, of that place, for acting as an apothecary, without being legally qualified to do so. Mr. Norcott admitted the facts, and therefore a verdict was given for £20, the amount of penalty and the costs.

HOSPITAL FOR CONSUMPTION.

At the Festival held on the 12th inst., for the benefit of the funds of this institution, the sum collected amounted to £2304.

BARON LARREY'S MONUMENT.

THE monument dedicated to the celebrated surgeon, Larrey, will be inaugurated in the early part of July, in the court of honour of Val-de-Grâce. It is composed of a statue in bronze, raised on a pedestal of white marble, with four bas-reliefs of the same metal. The latter represent four of the principal seats of war in which Larrey distinguished himself—namely, the Beresina, the Pyramids, Austerlitz, and Somosierra (Spain). The statue, which is nearly ten English feet in height, represents the Surgeon-in-chief of the Imperial armies standing, wrapped in his cloak, and leaning against a howitzer, the mouth of which is surmounted by some volumes of his works. A broken sword and an enormous cannon-ball entering and tearing up the ground are seen at his feet. On his works are laid various surgical instruments, which, with his left hand, the illustrious operator seems ready to seize, while in his right hand he holds a scroll representing the will of Napoleon, opened at the part wherein these words are written: "I bequeath a hundred thousand francs (£4,000) to the Surgeon-in-chief, Larrey, the most virtuous man whom I have ever known."

APOTHECARIES' HALL.

NAMES of gentlemen who passed their examination in the science and practice of medicine, and received certificates to practise on Thursday, 20th June, 1850:—
Hastwell Thornton, Cottingley House, Bradford, Yorks.—George Brown Turner—Robert Batty, Liverpool—Thomas Howarth Cockcroft, Reighley, Yorkshire—William Cooper, Bristol.

BOOKS & PERIODICALS RECEIVED FOR REVIEW.

(The List will be given in our next No.)

BIRTHS & DEATHS IN THE METROPOLIS During the Week ending Saturday, June 22.

BIRTHS.		DEATHS.	
Males....	740	Males....	394
Females..	690	Females..	381
	1430		775

CAUSES OF DEATH.

ALL CAUSES	775
SPECIFIED CAUSES	773
1. Zymotic (or Epidemic, Endemic, Contagious) Diseases....	161
<i>Sporadic Diseases, viz.—</i>	
1. Dropsy, Cancer, &c.	53
2. Brain, Spinal Marrow, Nerves, and Senses	91
4. Heart and Bloodvessels	27
5. Lungs and organs of Respiration	106
6. Stomach, Liver, &c.	54
7. Diseases of the Kidneys, &c.	11
8. Childbirth, Diseases of Uterus, &c.	8
9. Rheumatism, Diseases of Bones, Joints, &c.	7
10. Skin	1
11. Old Age	34
12. Sudden Deaths	7
13. Violence, Privation, Cold, &c....	20

The following is a selection of the numbers of Deaths from the most important special causes:

Small-pox	16	Convulsions	29
Measles	16	Bronchitis	43
Scarlatina	19	Pneumonia	47
Whooping-cough	28	Phthisis	102
Diarrhoea	18	Lungs	2
Cholera	0	Teething	8
Typhus	40	Stomach	5
Dropsy	18	Liver	12
Hydrocephalus	24	Childbirth	3
Apoplexy	21	Uterus	5
Paralysis	14		

REMARKS.—The total number of deaths was 88 below the average mortality of the twenty-fifth week of ten previous years.

METEOROLOGICAL SUMMARY.

Mean Height of the Barometer	30.05
" " " Thermometer	63.1
Self-registering do. Max. 99° Min. 58°	
* From 12 observations daily. * Sun.	

RAIN, in inches, 0.05.—Sum of the daily observations taken at 9 o'clock.

METEOROLOGICAL.—The mean temperature of the week was 3.4° above the mean of the month.

NOTICES TO CORRESPONDENTS.

Dr. Bucknill, Exminster.—The Reports have reached us, and shall receive our attention.
Mr. Balman.—The correction shall be made, and a proof sent before insertion.
Mr. Ross.—Owing to the space occupied by the Index, we must postpone the insertion of the Circular until next week.
Mr. R. Wailes's second letter has been received.
Dr. G. B. Wood.—The note and the journal have reached us. The subject to which the note refers shall receive our early attention, and be prominently noticed.
The London Hospital Report has been received.
The King's College Hospital Report is unavoidably postponed.
Dr. Gordon's paper, and the obituary memoir of Dr. Bardale, next week.

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